

1992 State of California's

Unreinforced Masonry Building

Law

International
Code Council - Model Building Code

July 30, 1997 - Report #S1002-16

Seismic Safety Commission

Wilfred D. Iwan

Chairman

Mechanical Engineering

LeRoy Crandall

Soils Engineering

Barbara Cram Riordan

Local Government

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(Chris Lindstrom)

State Senate

Morgan Davis

Insurance

James E. Slossen

Geology

Hal Bernson

Local Government

Paul F. Fratessa

Structural Engineering

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Local Government

Bruce A. Bolt

Seismology

Robert E. McCarthy

Local Government

Patricia Snyder

Volunteer Organizations

Lloyd S. Cluff

Utilities

Gary L. McGavin

Architecture and Planning

Frances E. Winslow

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(Tom White)

State Assembly

James McMullen

Fire Services

L. Thomas Tobin

Executive Director

Teri De Vriend

Richard McCarthy

Brenda Boswell

Laura Fowler

Susan Pelzman

Program Staffperson

Karen Cogan

Kathy Goodell

Brian Stoner

Tim Cronin

James Goodfellow

Fred Turner

Program Manager

Rita Darden

Ed Hensley

Ed Hensley

**1992 ANNUAL REPORT TO THE LEGISLATURE
on the**

**Status
of the
Unreinforced Masonry Building Law
(Government Code Section 8875 *et seq.*)**

**State of California
Seismic Safety Commission**

**1900 K Street, Suite 100
Sacramento, CA 95814
(916) 322-4917**

**June 30, 1992
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1992 ANNUAL REPORT TO THE LEGISLATURE
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Status of the Unreinforced Masonry Building Law
(Government Code Section 8875 et seq.)

The Unreinforced Masonry Building Law was authored by Senator Alquist as Senate Bill 547 and was signed into law by Governor Deukmejian in June of 1986 (See Appendix C). It required local governments to inventory unreinforced masonry buildings and establish earthquake hazard mitigation programs for these buildings by January 1, 1990.

Approximately 1 million occupants in 25,000 buildings are affected by the law. As of June 30, 1992, 78 percent of the affected jurisdictions have substantially complied with the law. This report describes the status of compliance of local governments implementing this law.

Introduction

The Unreinforced Masonry Building Law (URM) is a significant step for reducing the earthquake threat to the people of our state. Over ninety percent of the URM buildings in the areas of California with the highest seismic hazards are now in local hazard mitigation programs. 209 local governments have established URM programs. However, 79 typically smaller, vulnerable communities have yet to comply fully with the law, and still others have established ineffective programs that will do little to reduce hazards.

The challenge remains to effectively reduce hazards in URM buildings now that these programs are established or underway. The California Earthquake Hazards Reduction Act of 1986 set a goal of significantly reducing hazards by the year 2000, and we have made significant progress toward that goal.

The state made notable progress this year when it established a uniform building code for the reduction of earthquake hazards in those URM buildings that have load-bearing walls. However, the state still lacks a uniform code for hazards in nonbearing-wall URM buildings.

This past year included major efforts by

the California Building Codes Institute and the California Building Officials to step up training of building professionals.

In the sixth year since the passage of the URM Law, the Seismic Safety Commission has noted five significant issues that affect URM earthquake hazard reduction:

- Financing remains difficult to obtain and costly for most owners.
- Many local governments are hesitant to enact mandatory URM retrofitting ordinances and nearly all are disturbed that the state government has exempted its own buildings from similar requirements.
- The lack of a uniform code for reducing hazards in nonbearing-wall URM buildings has hampered many local government programs, owners, designers, and contractors.
- While there have been several notable efforts to improve the training of building professionals about reducing hazards, the lack of training and understanding is still a major impediment to the success of the URM Law.
- Some local governments are seeking amendments to the 1991 state law that makes the UCBC, Appendix Chapter 1 a model code. They would like the state to exempt existing hazard reduction ordinances, historical buildings, affordable housing, and Main Street URM buildings from the model code. They believe that while lower retrofit standards may result in more earthquake damage and life loss, they would cost less, have fewer impacts and be more attractive to encourage mandatory mitigation programs.

The Law

The URM Law requires cities and counties

within California's Seismic Hazard Zone 4 to do two things. First, they must inventory all unreinforced masonry buildings in their jurisdictions; second, they must establish local programs to mitigate the earthquake hazards in those buildings. These programs must include notifying the building owners of the potential earthquake hazards and should also include steps to mitigate the hazards. The law recommends including the following:

- Adoption of a program by ordinance to reduce the hazards of unreinforced masonry buildings.
- Standards for the seismic retrofit of these buildings.
- Measures to reduce the number of occupants in these buildings.

Variations in the details of the hazard mitigation programs can be adopted by local governments to reflect local conditions and economic constraints. The intent of the URM Law is to provide local governments the flexibility to manage effective earthquake hazard-reduction programs.

Seismic Hazard Zone 4 includes the major metropolitan areas of the Los Angeles Basin and the San Francisco Bay Area, and roughly 24 million people, or 80 percent of the state's population. This is the region of highest earthquake vulnerability in the nation.

Approximately 25,000 URM buildings with an average size of 10,000 square feet have been inventoried so far in Zone 4's 365 jurisdictions.

The URM Law could result in a \$4 billion effort to reduce earthquake hazards over the next decade. This cost, although large, pales in comparison with the \$100 billion in anticipated damage from a single major urban earthquake in California. Future earthquake losses can be greatly reduced by establishing effective URM hazard-reduction programs.

Status of the Law's Implementation

The Seismic Safety Commission is encouraged by the response of local governments to the URM Law. All except one of the jurisdictions affected have begun to take steps to comply with the law:

- 78 percent of the communities are in substantial compliance with the law, up slightly from 72 percent last year. Of those, 57 percent have established their mitigation programs. These communities include most of the URM buildings—92 percent—affected by the law. The other 21 percent of the communities have no URM buildings.
- 15 percent have completed their inventories and are now working on establishing programs.
- 6 percent have their inventories in progress.
- 1 city, Maricopa, has not reported any progress.

Table 1 provides a summary of the law's implementation. Figure 1 shows the status of compliance by percent of cities and counties in Zone 4. Figure 2 shows the status of compliance as a percentage of URM buildings in Zone 4. "Substantial Compliance" includes some cities that have established mitigation programs for most of their buildings but have not completed their inventories.

Table 1 shows that we have sixteen more mandatory strengthening programs than last year and three fewer notification-only programs. This reflects the efforts by several local governments to make substantial improvements to their existing programs. Many local governments have also updated their hazard reduction standards by adopting the Uniform Code for Building Conservation's Appendix Chapter 1.

The status of the law's implementation is being monitored by the Seismic Safety Commission through telephone calls and written reports from cities and counties. Although the Commission received numerous reports over the last three years, several of Seismic Zone 4's local governments still have not sent written reports to the Commission. Most of these noncomplying jurisdictions, however, have few or no URM buildings.

The Commission has sent copies of Appendix A to each local government with URM buildings for their review and update. Some cities are now beginning to report the numbers of buildings that are retrofitted or in progress. See Appendix A.

Approximately 35 percent of the

buildings have had their hazards reduced, the majority of which are in the Los Angeles Basin.

Types of Mitigation Programs

Earthquake hazard mitigation programs for URM buildings can be grouped into four categories: mandatory strengthening programs, voluntary strengthening programs, notification-only programs, and other programs. Their description, advantages and disadvantages are summarized in Table 2.

Mandatory strengthening programs have been the most popular and are an effective means for local governments to enforce the reduction of URM earthquake hazards.

Voluntary strengthening programs are likely to prove far more effective than programs that stop at notifying owners that their URM buildings are potentially hazardous.

The Commission believes that notification-only programs are ineffective and do not meet the intent of the law, which is to provide local governments with the flexibility to tailor their own effective hazard-reduction programs.

Other types of programs being implemented vary widely in terms of their effectiveness in reducing hazards. Figures 3 and 4 show the variety of types of mitigation programs in percentages of cities and counties and URM buildings respectively for those in substantial compliance.

Table 1

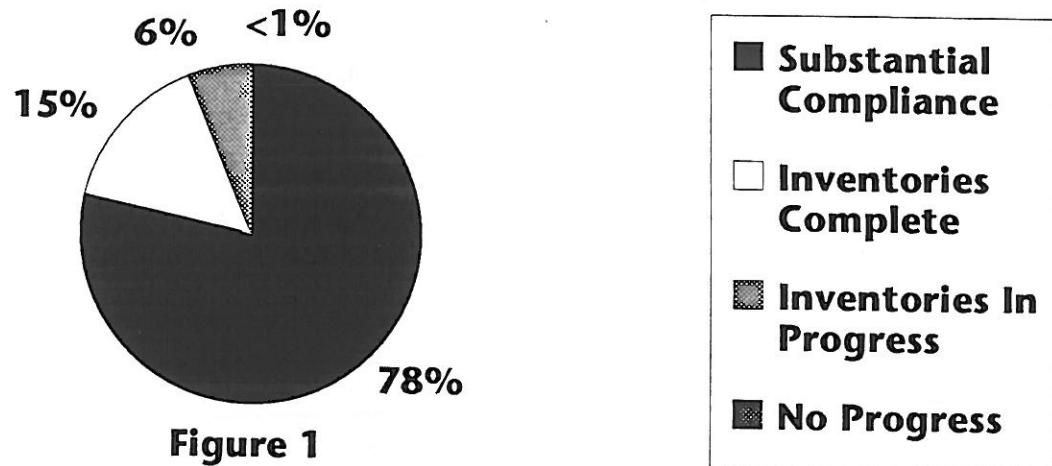
State Summary of the URM Law Implementation

	Number of Cities & Cos.	Cities & Cos. (%)	Population	Population (%)	Number of URM Buildings	URM Buildings (%)
Cities in Zone 4 Affected by the URM Law:						
Cities Without Inventory Started:	336	92%	18,158,290	80%	24,772	100%
Cities With Inventory Started:	1	0%	1,240	0%		
Cities Inv. Complete-No Mit. Prog:	20	5%	368,660	2%	415	2%
Cities With No URM's:	49	13%	1,813,395	8%	1,489	6%
Cities With Mitigation Programs:	72	20%	1,794,774	8%	0	0%
	194	53%	14,180,221	62%	22,868	92%
Counties in Zone 4 Affected by the URM Law:						
Counties Without Inventory Started:	29	8%	4,603,800	20%	1,012	100%
Counties With Inventory Started:	0	0%				
Counties Inv. Complete-No Mit. Prog:	2	1%	29,500	0%	26	3%
Counties With No URM's:	7	2%	732,450	3%	116	11%
Counties With Mitigation Programs:	5	1%	489,050	2%	0	0%
	15	4%	3,352,800	15%	870	86%
Total Cities and Counties in Zone 4:						
Cities and Cos. Without Inv. Started:	365	100%	22,762,090	100%	25,784	100%
Cities and Counties With Inv. Started:	1	0%				
Cities & Cos. Inv. Complete-No Mit. Prog:	22	6%	398,160	2%	441	2%
Cities and Counties With No URM's:	56	15%	2,545,845	11%	1,605	6%
Cits. and Cos. With Mit. Programs:	77	21%	2,283,824	10%	0	0%
	209	57%	17,533,021	77%	23,738	92%
Types of Mitigation Programs Established:						
Mandatory Program:	110	53%	11,448,387	65%	15,439	65%
Voluntary Program:	34	16%	1,439,920	8%	1,315	6%
Notification Only:	42	20%	3,166,734	18%	3,848	16%
Other Type of Program:	22	11%	1,455,780	8%	3,108	13%
Total Cits. & Cos. with Mit. Programs:	209	100%	17,510,821	100%	23,710	100%

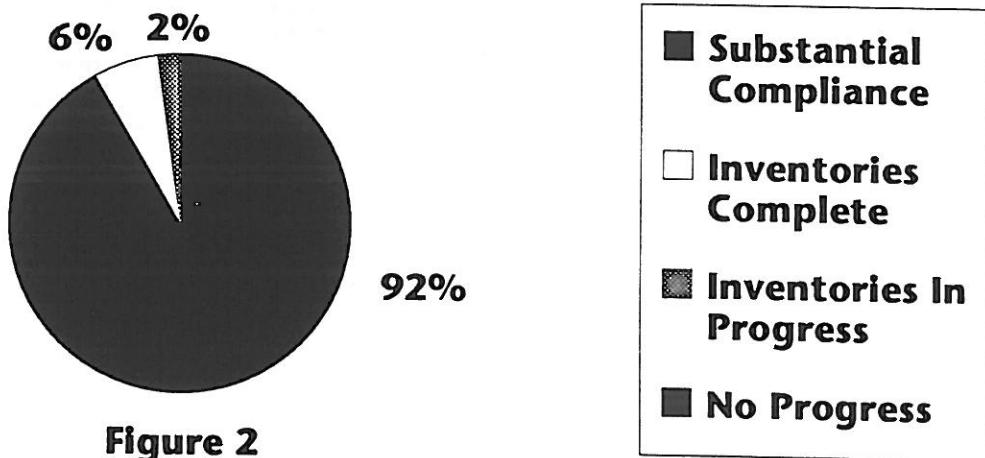
Table 2—Advantages and Disadvantages of Major Types of Mitigation Programs for Unreinforced Masonry Buildings

<i>Program Description</i>	<i>Advantages</i>	<i>Disadvantages</i>
	<p>Mandatory Strengthening Programs</p> <ul style="list-style-type: none"> Requires owners to reduce earthquake hazards within established timeframes Timeframes for compliance start when an order is issued by the Building Department Establishes seismic retrofit technical standards Sets a goal of hazard reduction—not total elimination of the hazards Provides for appeals <ul style="list-style-type: none"> Local governments can effectively enforce the program and reduce hazards Building departments can monitor and report progress Building departments can control compliance rates by slowing down or speeding up the issuance of orders to building owners Compliance rates vary with the number of building occupants, with longer timeframes for smaller buildings Most other local governments have similar programs. 	<ul style="list-style-type: none"> Imposes arbitrary and at times inflexible deadlines on building owners Compliance schedules do not necessarily reflect the limits of the local design and construction industry resources. Can impose economic hardships on owners and occupants Compliance schedules do not consider hazards to passersby or hazards from adjacent or unoccupied buildings.
	<p>Voluntary Strengthening Programs</p> <ul style="list-style-type: none"> Requires owners to prepare hazard evaluation reports Requires owners to write letters that indicate their intentions to reduce hazards Reports and letters are made available to the public Establishes seismic retrofit technical standards Owners set their own timeframes for compliance with standards <ul style="list-style-type: none"> Provides effective disclosure of hazards to owners and in some cases to tenants. Flexible timeframes for compliance can result in fewer economic difficulties Rates of hazard reduction can vary depending on owner's resources and demands on the design and construction industry Provides an effective management and monitoring system to local governments Local governments can always re-consider the program's progress and impose mandatory requirements if it is ineffective. 	<ul style="list-style-type: none"> Effective in reducing hazards only if coupled with strong economic environments, and financial, planning, and zoning incentives Not effective with owners who choose not to cooperate, and thus can be unfair to cooperative owners May prolong overall hazard reduction efforts and earthquake risk exposure Owners must pay higher fees to design professionals Does not consider hazards for occupants and passersby or from adjacent buildings.
	<p>Notification-Only Programs</p> <ul style="list-style-type: none"> Owners are notified by letter that their buildings are potentially hazardous. <ul style="list-style-type: none"> Some local governments state that it meets the minimum intent of the URM Law Minimal initial cost to local governments No direct cost to owners who choose to ignore hazards Can be effective if owners are few and cooperative and if governments adopt seismic retrofit standards 	<ul style="list-style-type: none"> Programs have been ineffective in reducing earthquake hazards Owners are not protected from future code changes if they choose to reduce hazards Owners are not encouraged to consider hazard reduction Owners are not informed of specific hazards and are likely to react with disbelief Local government can't easily monitor hazard reduction progress Imposes demands on local governments to deal with unhappy owners Seismic retrofit standards are typically not adopted

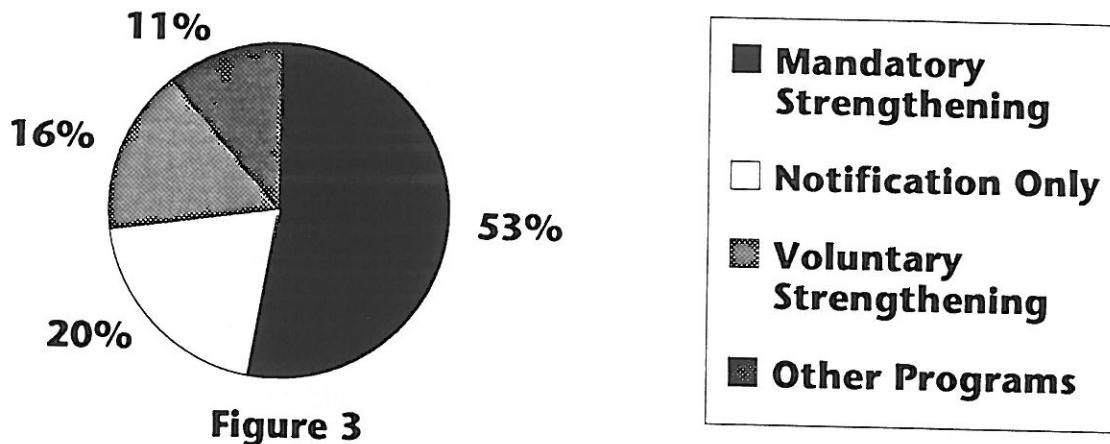
**URM Law Status as of 6/30/92
(Percent of Cities and Counties)**



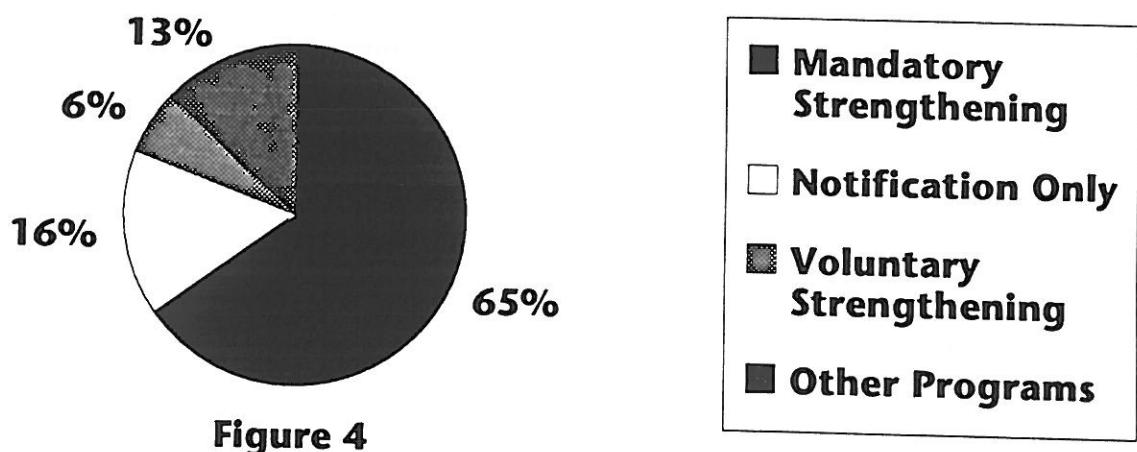
**URM Law Status as of 6/30/92
(Percent of URM Buildings)**



**Types of URM Programs Established as of 6/30/92
(Percent of Cities and Counties)**



**Types of URM Programs as of 6/30/92
(Percent of URM Buildings)**



Observations of Recent Earthquakes

In recent earthquakes, considerable damage was caused by URM buildings. The moderate Sierra Madre Earthquake of June 28, 1991, caused many unstrengthened URM buildings to suffer more damage than those recently strengthened. There were many excellent examples of the benefits of seismic retrofitting.

The April 25 and 26, 1992 earthquakes near Petrolia occurred in lightly populated rural and heavily forested settings. Wood frame construction is the prevalent type of building in the affected towns of Petrolia and Scotia, and the cities of Rio Dell and Ferndale.

In Ferndale, a town of 1500 people, the main grocery store lost its front and rear URM parapets, crushed two cars and sent paraders scampering to avoid the falling brick. Luckily no one was hurt seriously—not even a dog that was trapped in one of the cars. The URM grocery store lost much of its stock and has since been forced to relocate into another building. See Figures 5 through 8.

This historic building was also damaged during the great 1906 earthquake. It was repaired to its original, unbraced state after 1906 only to face similar damage in 1992. This time, the damage was so extensive that the owner chose to demolish it. Only a vacant lot remains. See Figure 8.

The remainder of Ferndale's downtown had wood frame construction, and, except for minor damage and broken storefront glass, fared quite well.

Ironically, Fortuna is one of the few jurisdictions affected by the earthquakes that is in compliance with the URM Law. However, its URM building had not been retrofitted yet. It too was damaged and subsequently demolished.

Ferndale and Humboldt County have not complied with the URM Law. Similarly, Pomona was not in compliance at the time of the 1991 Upland earthquake which damaged many URM buildings.

In Southern California, the Joshua Tree Earthquakes of April 15, 1992 unveiled several URM buildings that had not previously been identified in local

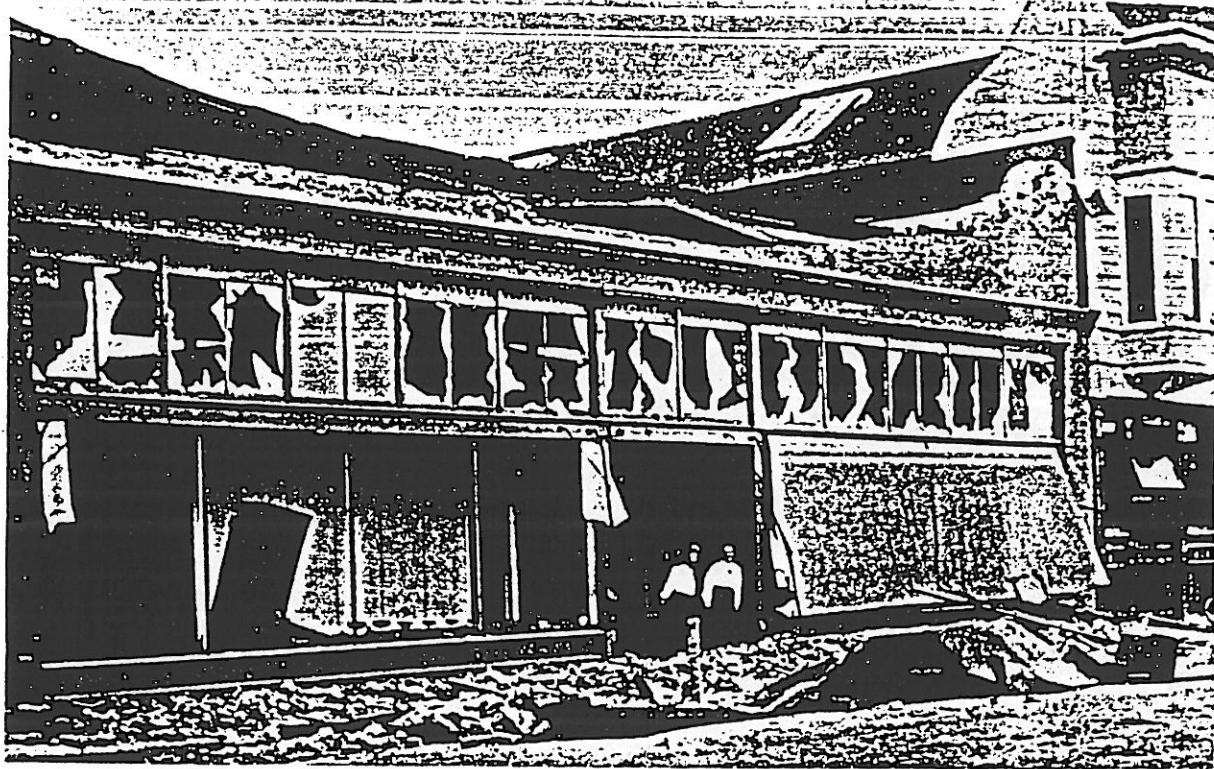
government inventories.

It's quite easy to appreciate the hazards of URM buildings after seeing gaping holes in failed walls and crushed cars. But it is unfortunate that owners and occupants—who were indeed surprised—had not been made aware of their risky situation and occupations back in 1990.

The lessons to be learned from these earthquakes are clear:

- URM buildings pose a present and reoccurring threat to life, property, and livelihood. Their hazards should be identified and evaluated, disclosed to the public, and mitigated in a timely manner.
- Retrofits of URM buildings could have reduced the moderate damage from these earthquakes and possibly avoided demolition.
- Other building types can pose hazards, although generally less life-threatening than URM buildings, particularly when coupled with the threat of fire.
- Older residential buildings with unbraced cripple walls and URM chimneys pose a substantial economic risk to the state.
- Older facilities of most types of construction pose significant risks of losing building functions after moderate and major earthquakes. Most dwellers and businesses in California are obviously not prepared for earthquake losses.
- Buildings, such as public schools, that are built with high quality construction, code enforcement and earthquake resistance in mind, performed markedly better than other buildings in these recent earthquakes.

Seismologists surmise that California has recently entered into a new era of heightened seismic activity. All the more reason to face up to the hazards of URM buildings.



A. Wrecked stores. Ferndale, Humboldt County.

Fig. 5 - 1906 Damage to the Ferndale Grocery Store

(The California Earthquake of April 18, 1906, Report of the State Earthquake Investigation Commission, Vol. 1, Plate 66,

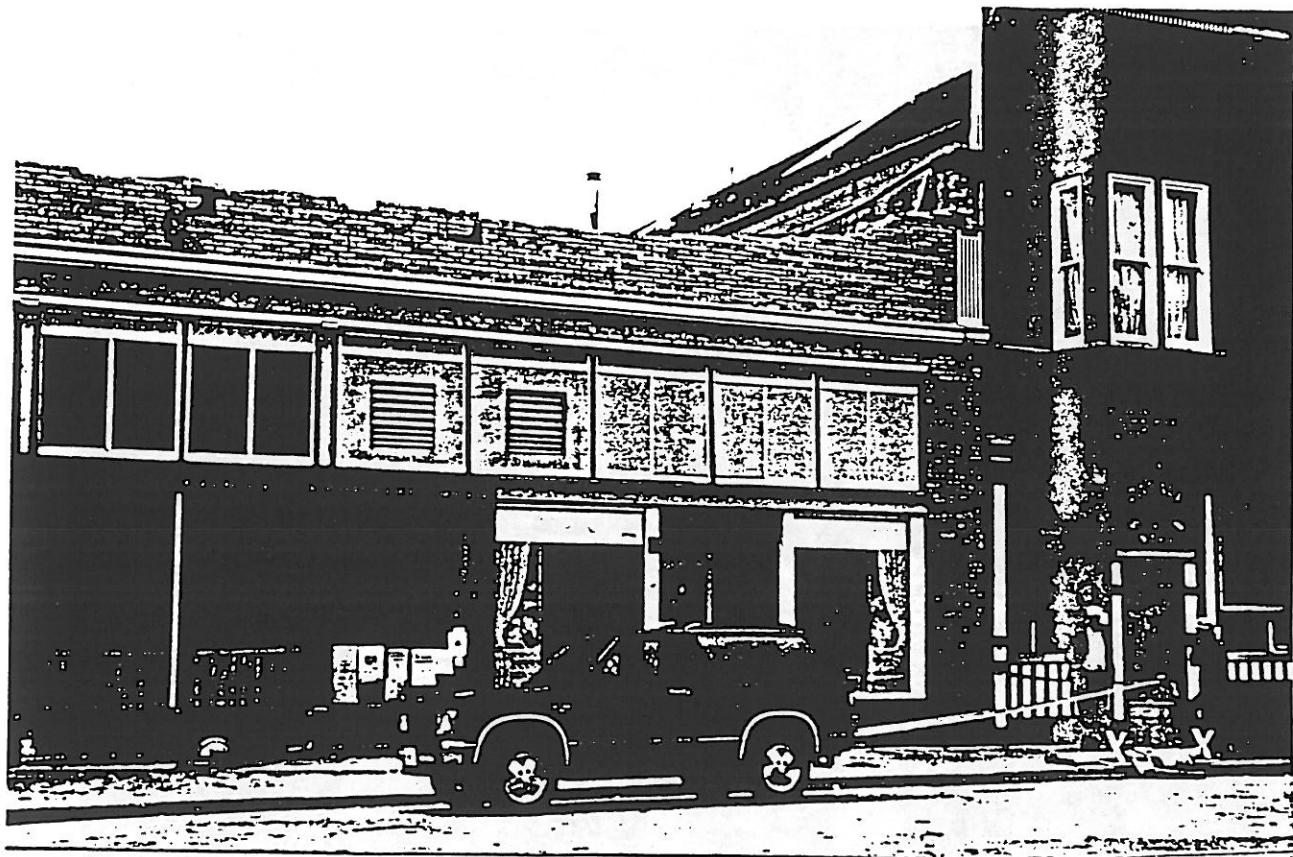


Fig. 6 - 1992 Damage to the same Ferndale Grocery Store

(Seismic Safety Commission Photo, April 26, 1992) Ferndale has not complied with the URM Law.



Fig. 7 - 1992 Damage to the same Ferndale Grocery Store

(Seismic Safety Commission Photo, April 26, 1992) This damage could have been reduced if the owner had been informed of the risk and had strengthened the building.

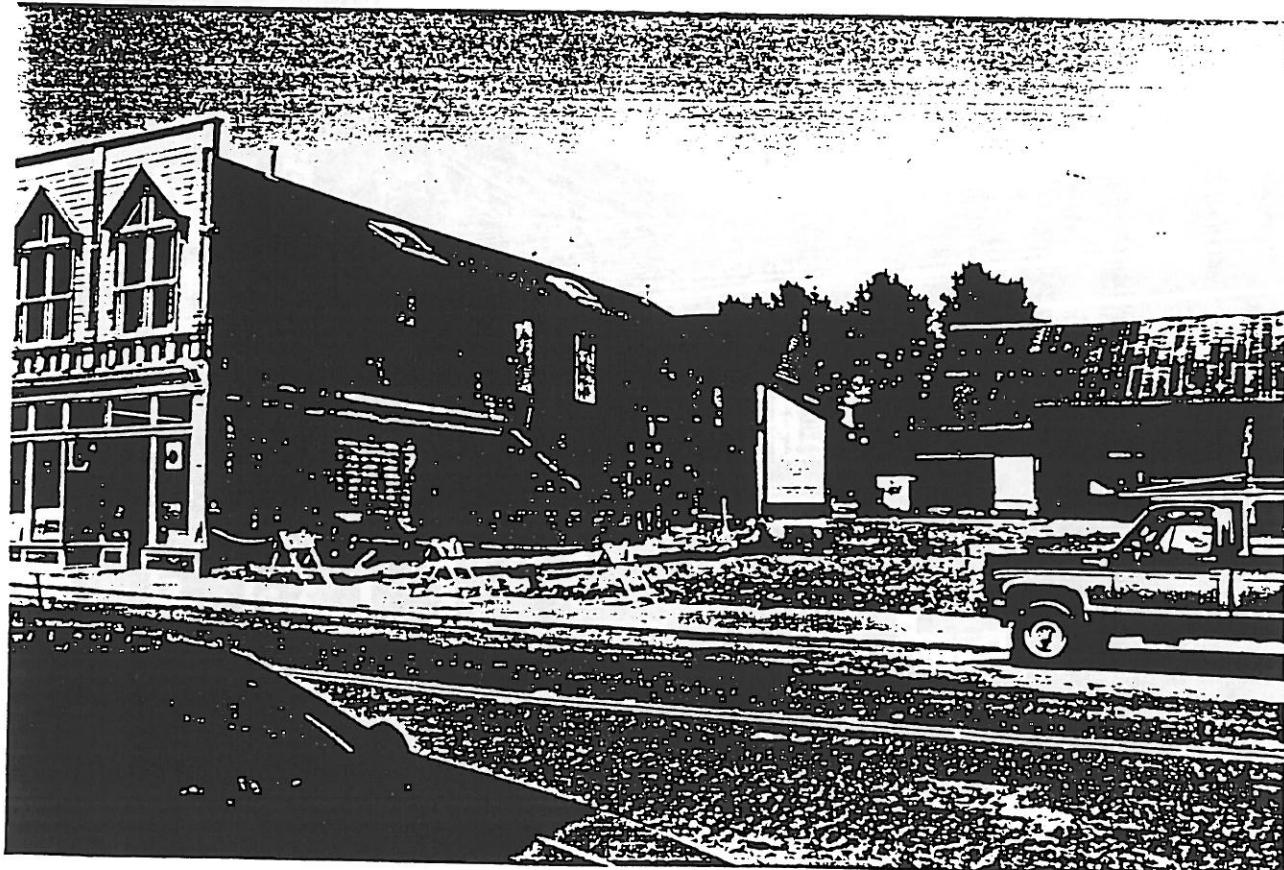


Fig. 8 - Site of the Recently Demolished Ferndale Grocery Store

(Seismic Safety Commission Photo, June 4, 1992)

Legislative Efforts

This past year there has been a dramatic reduction of earthquake-related legislation as compared to the flurry of activity after the 1989 Loma Prieta Earthquake. This legislation still avoids the central issues of seismic hazard reduction such as the high costs and the need for incentives. Some of the key bills that became law last year are summarized below:

- **AB 204 (Cortese)**—Establishes the Uniform Code for Building Conservation Appendix Chapter 1 as a minimum seismic retrofit standard for bearing wall URM buildings. Local agencies will enforce this new model code starting July 1, 1993, and they may amend it using the same procedures they currently can use to amend the Uniform Building Code. (1991 Statutes Chapter 173)
- **AB 209 (Cortese)**—Appropriates \$481,000 to the Seismic Safety Commission from the Proposition 122 bond fund for seismic retrofit research and development effort. (1991 Statutes Chapter 346)
- **AB 1001 (W. Brown)**—Allows cities and counties to use municipal bonds to finance the seismic retrofit of privately-owned unreinforced masonry buildings.

Three bills were vetoed by Governor Wilson:

- **AB 416 (Floyd)**—Would have allowed building owners to make incremental life safety and seismic improvements without requiring the entire building to meet all current building code requirements, provided an unsafe condition is not created.

The veto message stated that the state's current exemptions from handicap access requirements for hardship cases provide more than adequate flexibility, and that AB 416 was not necessary.

- **AB 272 (Hansen)**—Would have allowed local governments to use local ordinances in place of Appendix Chapter 1 of the Uniform Code for Building Conservation if the local government had adopted their ordinance prior to January 1, 1993. Local governments could have ruled parts

of that code inapplicable if they found that local socio-economic conditions warranted lower seismic safety standards.

The veto message stated concern over changing a well-established precedent by allowing local governments to lower building standards for socio-economic reasons.

- **AB 1964 (Arias)**—Would have established a goal for the state of California to retrofit or vacate all state owned or leased unreinforced masonry buildings by the year 2005.

The veto message said that the state is now inventorying its buildings but doesn't yet know how many URM buildings it owns. Currently the state cannot estimate the capital needed to meet this bill's goal.

Three other bills that are still pending could affect hazard reduction efforts:

- **AB 1963 (Arias)**—Would require the posting of placards warning the public of seismic risk inside and near unstrengthened URM buildings within three months of the buildings' sales.
- **AB 2358 (Frazee)**—Would allow local governments to adopt seismic retrofit standards that provide less safety than the Uniform Code for Building Conservation for pre-existing ordinances or if certain buildings have architectural or historical significance, or are part of a Main Street Program.
- **SB 597 (Alquist)**—Would require the Office of the State Architect to develop seismic retrofit guidelines for other types of hazardous buildings by July 1, 1996.

A Review of Last Year's Annual Recommendations

- **1991 Recommendation:** Request cities and counties to provide more complete URM building occupancy information where available. The URM Law requires the collection and reporting of building occupancy information, but unfortunately many cities did not collect it during their inventories of URM buildings.

Current Status: In its 1992 survey of local

governments, the Commission has reminded those governments that did not comply with this requirement. Some of them have produced subsequent reports.

- **1991 Recommendation:** Ask cities and counties with URM hospitals to report their hazard mitigation program information to the Office of Statewide Health Planning and Development which must enforce local government standards that are more stringent than current state regulations.

Current Status: The Commission's 1992 survey of local governments asked local governments with URM hospitals in their inventories to fill out an additional information form which will be relayed to the Office of Statewide Health Planning and Development. So far, four local governments have indicated that they have a total of 29 URM hospital buildings in their inventories.

- **1991 Recommendation:** Introduce legislation to address the seismic retrofit of potentially hazardous state-owned buildings in conjunction with the Commission's recommended policy on acceptable levels of earthquake risk. Work with the Legislature and Governor to adopt a final earthquake risk policy.

Current Status: The Commission sponsored AB 1964 (Areias) which would have established a goal of mitigating the hazards in the state government's URM buildings by the year 2000. This proposal was considerably less ambitious than that proposed by the Commission's policy on acceptable levels of earthquake risk which recommended addressing earthquake hazards in all major state government buildings by the year 2000. Governor Wilson vetoed this bill because the state doesn't know the scope of its hazards or the amount of money needed to mitigate them.

The Commission's Policy on Acceptable Levels of Earthquake Risk in State Buildings was referred to the Office of the Legislative Analyst which has declined to complete its assessment of the policy because of budget and staff reductions.

- **1991 Recommendation:** Encourage the

development of seismic retrofit standards for nonbearing-wall URM buildings as well as other potentially hazardous buildings.

Current Status: The Strong Motion Instrumentation Program has recovered several strong motion records from 1990 and 1991 moderate earthquakes in the Los Angeles area. The Program has also awarded a major research project to apply the knowledge gained from those records to ongoing retrofit code development efforts.

The Seismic Safety Commission and the Office of the State Architect have identified nonbearing-wall URM buildings as a prevalent hazard in state and local government buildings. The Commission plans to focus some of its Proposition 122 Research and Development Plan on retrofit provisions for these buildings.

- **1991 Recommendation:** Continue to monitor the status of local government compliance with the URM Law.

Current Status: The Commission has continued to collect information on local government progress. The most recent updates are reflected in this report and Appendix A.

- **1991 Recommendation:** Hold one or more seminars on technical issues relating to the seismic retrofit of URM buildings to improve the education of building officials, inspectors, and contractors.

Current Status: The Commission co-sponsored one URM seminar with the California Building Codes Institute in San Jose. The California Building Officials has also held several similar seminars in other parts of the state.

- **1991 Recommendation:** Complete a booklet and seminar on financial assistance alternatives for seismic retrofitting in conjunction with the Bay Area Regional Earthquake Preparedness Project and others.

Current Status: This handbook on financial incentives for the seismic retrofit of URM buildings is now available. It has been developed by the Association of Bay Area Governments with funds from the Commission, the Federal Emergency Management Agency

and the Bay Area Regional Earthquake Preparedness Project.

- **1991 Recommendation:** Complete and disseminate the URM Owners Handbook to local governments for their use.

Current Status: This project has been stalled due to the lack of editorial staff at the Commission.

Summary and Conclusions

Nearly all local governments in Seismic Zone 4 have taken steps to comply with the URM Law. Over ninety percent of the URM buildings in Zone 4 are now located in cities and counties with hazard-reduction programs, yet one out of four of these programs is relatively ineffective in reducing earthquake hazards in URM buildings.

The Commission believes that:

- **Mandatory strengthening programs** are effective in significantly reducing URM hazards.
- **Voluntary strengthening programs** will probably have some effectiveness in cities with strong economic conditions and incentive programs. However, those cities will probably be faced with at least a few uncooperative owners that will not retrofit their buildings.
- **Other programs**, such as simply notifying the owners, will usually not be effective in reducing earthquake hazards in a timely manner.

Increased public awareness as well as financial and insurance pressures will come to bear upon most URM building owners over the next decade to address the seismic hazards in their buildings.

The state government is at a critical stage for the URM hazard reduction effort. Despite a significant budget deficit, the state is faced with the costs of retrofitting its own buildings and bridges as are most local governments. Building owners and local governments are looking to the state for both a firm commitment and assistance.

Most cities, counties, and building owners have expressed a willingness to take more effective steps to reduce their hazards if affordable financing is made available. This will take an equally firm commitment from

private lending institutions statewide.

The success of the URM Law will be influenced by future earthquakes, the perception of risk, and how they, in turn, influence the public's willingness to allocate money for hazard reduction.

The Commission looks forward to the time when we will know that we have enacted all practical measures to reduce the earthquake hazards in unreinforced masonry buildings.

Recommendations for 1992-93

- Continue to monitor the status of local government compliance with the URM Law.
- Introduce legislation to encourage local governments in seismic zone 3 to inventory their URM buildings.
- Introduce legislation to require the disclosure of hazards to the public upon the sale of URM buildings statewide.
- Introduce legislation to amend the state's special assessment district laws so that local governments can tailor financial incentives for the more flexible mitigation of seismic risk in existing facilities.
- Continue to pursue pending legislation to establish uniform guidelines for the evaluation and seismic retrofit of hazardous buildings other than URM buildings.
- Encourage the development of seismic retrofit standards for nonbearing-wall URM buildings.
- Encourage the development of guidelines for buildings used for storing acutely hazardous materials.
- Complete the edits and disseminate the URM Owners Handbook to local governments for their use.
- Encourage state agencies to disclose the seismic hazards of existing state government buildings to the public.
- Prepare and disseminate seismic hazard guidebooks for commercial building owners and prospective buyers.

Appendices

Appendix A

Unreinforced Masonry Building Hazard Identification and Mitigation Efforts

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Buildings	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Adelanto	Yes	Yes	Yes		12 URM			
Agoura Hills	Yes	Yes	N/A		0			
Alameda	Yes	Yes	Yes	2/17/91	197 URM	Parapet, wall anchorage, and wall slenderness limits only	1985 Seismic Safety Commission Model Ordinance partially referenced	
Alameda Co.	Yes	Yes	Yes		18 URM	Notices to owners		
Albany	Yes	Yes			60 URM			
Alhambra	Yes	Yes	Yes	Yes	12/28/90	164 Non-historic URM 6 Historic URM	Mandatory strengthening	1985 Edition Chapter 96 of the Los Angeles County Code
Anaheim	Yes	Yes	Yes	11/15/89	16 URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance	In 1988, the city originally believed that they only had 1 URM which was demolished, subsequent inventories identified more bldgs
Antioch	Yes				25 URM			
Apple Valley	Yes	Yes	Yes	5/1/91	14 URM	Notices to Owners, Retrofits triggered upon alterations or additions	1987 Edition of the Uniform Code for Building Conservation	
Arcadia	Yes	Yes	Yes	Yes	2/7/90	23 URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance
Arcata	Yes	Yes	N/A		0			
Arroyo Grande	Yes	Yes	Yes	1/1/90	25 URM	Mandatory strengthening	1987 Edition Uniform Code for Building Conservation Appendix Chapter 1	Reduced permit fees, extended time limits, non-conforming building use permitted
Artesia	Yes	Yes	Yes	11/30/89	4 URM	Mandatory strengthening	1985 Edition Chapter 96 of the Los Angeles County Code	
Arvin	Yes	Yes			19 URM			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Atascadero	Yes	Yes	Yes	8/27/91	28 URM	SSC Model Ordinance		# Bldgs in Partial Compliance or under Construction: 2 # Bldgs with No Progress: 2
Atherton	Yes				1 URM			
Avalon	Yes	Yes	Yes	12/20/89	19 URM	Mandatory strengthening	1985 Edition Chapter 96 of the Los Angeles County Code	# Bldgs in Full Compliance: 2 # Bldgs with Permits Issued: 2 # Bldgs with Plans Submitted: 3 # Bldgs with No Progress: 12
Avenal	Yes	Yes	Yes		8 URM			
Azusa	Yes	Yes	Yes	8/16/85	24 URM	Mandatory strengthening	1982 Edition of Division Code	
Bakersfield	Yes	Yes	Yes	6/24/92	191 URM	Voluntary Strengthening	1991 Ed. UCBC Appendix Chapter 1	# Bldgs in Full Compliance: 25 # Bldgs in Partial Compliance / Under Construction : 1 # Bldgs with No Progress: 165
Baldwin Park	Yes	Yes	Yes	1955	32 URM	1955 program of parapet bracing and wall anchors 1989	1982 Edition of Division Code	
Banning	Yes	Yes	Yes	11/15/89	49 URM	Notices to owners	None	
Barstow	Yes	Yes	Yes		93 URM			
Beaumont	Yes	Yes	Yes	1/28/91	37 URM	Mandatory strengthening	1988 Edition of Division Code	
Bell	Yes	Yes	Yes	1985	52 URM			# Bldgs in Partial Compliance / Under Construction : 1 # Bldgs with Plans Submitted: 3 # Bldgs with No Progress: 48
Bell Gardens	Yes	Yes	Yes	N/A	0			
Bellflower	Yes	Yes	Yes	1/19/90	26 URM	Mandatory strengthening	1985 Edition Chapter 96 of the Los Angeles County Code	

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Belmont	Yes	No	Yes	1/9/90	4 URM	Mandatory strengthening	1987 Edition Uniform Code for Building Conservation as amended to reflect the 1990 Draft Model Ordinance, State Historic Building Code	
Belvedere	Yes	Yes	N/A		0			
Benicia	Yes	Yes	Yes	4/12/90	21 Non-Historic URM 18 Historic URM	Notices to owners Historic building owners were not notified, notices to tenants, semiannual progress reports by building official	None	
Berkeley	Yes	Yes	Yes	12/29/89, 11/15/91	587 Buildings, All Pre-1976 Assembly, Business, Educational, Hazardous, and Resident with 5 or more units	Mandatory, nonbearing walls and veneers.	City will provide prescriptive standards for tall veneers, parapets and simple one or two story buildings. SEAOC/CALBO document with modifications.	City established a one-time fee of \$22 on all business licenses to recover city's program startup costs. City directed its staff to develop a hazards evaluation ordinance to be followed by a mandatory strengthening ordinance pending the availability of state and federal financing.
Beverly Hills	Yes	Yes	Yes		128 URM			A city ordinance is scheduled to begin the formal review process on July 1st, hopefully to be adopted by the end of the calendar year. # Bldgs in Full Compliance: 20 # Bldgs in Partial Compliance or under Construction: 6 # Bldgs with Plans Submitted: 8 # Bldgs with No Progress: 94
Big Bear Lake	Yes				41 URM			
Bishop	Yes	Yes	Yes	4/12/90	1 URM	Engineer's Evaluation Report, Posting Signs, Mandatory Strengthening	1988 UCBC State Historical Building Code	
Blue Lake	Yes	Yes	N/A		0			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Bradbury	Yes	Yes	N/A		0			
Brawley	Yes	Yes	Yes	12/28/89	66 URM	Notices to owners	None	# Bldgs in Full Compliance: 16 (demolished or exempt) # Bldgs with No Progress: 50
Brea	Yes	Yes	Yes	12/26/89	25 Non-Historic URM 2 Historic URM	Notices to owners	None	
Brentwood	Yes	Yes	Yes	6/91	7 URM	Other		
Brisbane	Yes	Yes	Yes	1/8/90	4 URM	Voluntary strengthening	1988 Edition of the City of Los Angeles Division 88, for tiltup concrete buildings Section 2314 of the 1973 UBC upon major alterations, additions, or changes of use	Ordinance also covers tiltup buildings. # Bldgs with No Progress: 4
Buena Park	Yes	Yes	Yes	6/24/91	5 URM	Mandatory strengthening	1988 Edition of the City of Los Angeles Division 88	
Burbank	Yes	Yes	Yes	11/7/89	51 URM	Mandatory strengthening	1982 Edition of Division 88 Los Angeles City Code	
Burlingame	Yes	Yes	Yes	8/20/90 9/17/90	63 URM	Mandatory strengthening	Similar to the February 1990 Edition of the Seismic Safety Commission Model Ordinance	
Calexico	Yes					Not Reported		
California City	Yes	Yes	N/A		0			
Calipatria	Yes	Yes	Yes	8/2/90	6 URM	Mandatory strengthening	1988 Edition of the County of Los Angeles Chapter 96	# Bldgs with No Progress: 30
Calistoga	Yes				30 URM			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Camarillo	Yes	Yes	Yes	7/24/91	37 URM	Mandatory strengthening	Feb. 1990 Seismic Safety Commission Model Ordinance	
Campbell	Yes	Yes	Yes	12/5/89	9 URM	Mandatory strengthening	Complete 1985 Edition Uniform Code for Building Conservation including the Appendices	City Redevelopment funds to be used as available. # Bldgs in Full Compliance: 2 # Bldgs with No Progress: 7
Capitola	Yes	Yes	Yes	11/17/89	1 URM	Demolition		# Bldgs with No Progress: 8
Carlsbad	Yes	Yes			8 URM		A mandatory mitigation program based on UCBC is scheduled for Council action on 6-23-92.	
Carmel	Yes	No	Yes	11/8/89	26 Bldgs URM, Pre-1935 with 100+ Occupants Pre-1976 with 300+ Occupants	Voluntary Strengthening	1987 Edition of the Uniform Code for Building Conservation Appendix Chapter 1 for URM Bldgs, 1973 Edition of the UCBC for Non-URM Buildings, 1985 UCBC	20 Bldgs were removed from the inventory after seismic hazard evaluation reports were submitted to the City June 17, 1991.
Carpinteria	Yes	Yes	Yes	11/20/90	3 URM	Mandatory strengthening	None Reported	
Carson	Yes	Yes	Yes	1/8/90	32 URM	Mandatory Strengthening	1985 Edition Chapter 96 of the Los Angeles County Code	# Bldgs in Full Compliance: 22 # Bldgs in Partial Compliance or under Construction: 10
Cathedral City	Yes	Yes	N/A		0			
Cerritos	Yes	Yes	N/A		0			
Chino	Yes	Yes	Yes	10/3/89	27 URM	Posting	1985 Edition of the Uniform Code for Building Conservation	# Bldgs in Full Compliance: 1 # Bldgs in Partial Compliance or under Construction: 26

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Claremont	Yes	Yes	Yes	9/10/91	30 historic URM, 1 non-historic URM	Mandatory strengthening	Parapets and wall anchors only	In volunteer strengthening phase until August 1992. # Bldgs in Full Compliance :7 # Bldgs in Partial Compliance or under Construction: 1 # Bldgs with Permits Issued: 1 # Bldgs with Plans Submitted: 3 # Bldgs with No Progress: 19
Clayton	Yes	Yes			1 URM			
Clearlake	Yes	Yes	Yes	1/8/90	5 Non-historic URM 1 historic URM	Seismic Evaluation Reports, Posting, Bracing of Parapets and Veneer, Full Strengthening required at time of major remodel or repairs, Mandatory Strengthening, Historic Buildings are Exempt	Modified Appendix Chapter 1 of the Uniform Code for Building Conservation, State Historical Building Code	
Cloverdale	Yes				18 URM			
Coachella	Yes	Yes			14 URM			# Bldgs in Full Compliance :1 # Bldgs with No Progress: 13
Coalinga	Yes	Yes	N/A		0			
Colma	Yes	Yes	Yes	2/28/90	4 URM	Notices to owners, seismic hazard evaluation reports required	None	Reports indicate that none of the buildings have been determined to be hazardous. City is reviewing the engineering reports.
Colton	Yes	Yes	Yes	3/23/90	20 URM	Notices to owners	None	
Commerce	Yes	Yes	Yes	11/20/89	9 URM	Mandatory strengthening	1985 Edition Chapter 96 of the Los Angeles County Code	# Bldgs in Full Compliance :3 # Bldgs with Plans Submitted: 1 # Bldgs with No Progress: 5
Compton	Yes	Yes			18 URM			
Concord	Yes	Yes	Yes		12 Nonhistoric URM, 2 historic URM	Mandatory Strengthening within 5 years	UCBC Appendix UCBC Appendix Chapter 1	

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Contra Costa County	Yes	Yes			66 URM			
Corona	Yes	Yes	Yes	12/21/89	14 URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance	# Bldgs in Full Compliance: 6 # Bldgs with Plans Submitted: 7 # Bldgs with No Progress: 1
Corte Madera	Yes	Yes	Yes	11/20/90	3 URM	Notices to Owners	None	
Costa Mesa	Yes	Yes	N/A		0			
Cotati	Yes	Yes	N/A		0			
Covina	Yes	Yes	Yes	11/28/90	75 URM	Notices to Owners	None	# Bldgs in Full Compliance : 1 # Bldgs with No Progress: 74
Cudahy	Yes	Yes	N/A		0			
Culver City	Yes	Yes	Yes	2/9/87	65 URM	Mandatory strengthening	1982 Edition of Division Code	
Cupertino	Yes	Yes	Yes	5/21/90	1 URM	Mandatory strengthening	1990 Edition Seismic Safety Commission Model Ordinance	
Cypress	Yes	Yes	N/A		0			
Daly City	Yes	Yes	Yes	1/22/90	3 URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance	# Bldgs in Full Compliance: 1 # Bldgs with No Progress: 2
Dana Point	Yes	Yes	N/A		0			
Danville	Yes	Yes	Yes	3/16/90	1 Non-historic 4 Historic URM, all retrofits are underway,	Notices to owners	None reported	A mandatory strengthening program is being considered for adoption in May 1991.
Davis	Yes	Yes	N/A		0			
Del Rey Oaks	Yes	Yes	N/A		0			
Delano	Yes	Yes	Yes	12/4/89	38 URM	Notices to owners	None	
Desert Hot Springs	Yes	Yes	Yes	6/18/92	1 URM	Demolition	None	# Bldgs in Full Compliance: 1 (demolished in 1989)
Diamond Bar	Yes	Yes	N/A		0			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Dixon	Yes	Yes	Yes	Yes	14 URM	Seismic retrofits are triggered upon sale or alterations, Notices to Owners	Uniform Code for Building Conservation	# Bldgs in Partial Compliance / Under Construction : 2 # Bldgs with No Progress: 12
Downey	Yes	No	Yes	Yes	2/5/90	14 Pre-1957 URM buildings except one and two family dwellings	1985 Edition UCBC, 20% gravity for walls, 15 lb. wind load, 50% gravity for parapets, diaphragms 1/2 of current code	Inventory not complete.
Duarte	Yes	Yes	Yes	N/A	0			
Dublin	Yes	Yes	N/A	N/A	0			
East Palo Alto	Yes	Yes	N/A	N/A	0			
El Centro	Yes	Yes	Yes	Yes	12/28/89	96 URM	Mandatory strengthening - retrofits are required by 1995. Earlier program sent Notices to owners	1991 Edition Uniform Code for Building Conservation Appendix Chapter 1
El Cerrito	Yes	Yes	Yes	Yes	11/7/88	32 Bldgs URM, Pre-1935 with 100+ Occupants	1985 Edition Uniform Code for Building Conservation	Owners in violation guilty of misdemeanor.
El Monte	Yes	Yes	Yes	Yes	2/9/88	25 URM	Analysis required under a facade improvement ordinance	None
El Segundo	Yes	Yes	Yes	Yes	4/5/90	14 URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance
Emeryville	Yes	Yes	Yes	Yes	6/90	101 URM	Structural analysis and report and mitigation by 8/93.	# Bldgs in Full Compliance: 28 # Bldgs in Partial Compliance or Under Construction: 3 # Bldgs with Permits Issued: 3 # Bldgs with Plans Submitted: 5 # Bldgs with No Progress: 62
Encinitas	-	Yes	-	-	-	20 URM		

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Escondido	Yes	Yes			57 URM			
Eureka	Yes	Yes	Yes	11/21/89	27 URM	Structural analysis, mandatory strengthening, hardship time extensions	1987 Edition of the Uniform Code for Building Conservation as modified	Buildings were removed from the inventory 12/20/90. # Bldgs in Partial Compliance or under Construction: 2 # Bldgs with Permits Issued: 3 # Bldgs with Plans Submitted: 2 # Bldgs with No Progress: 20
Fairfax	Yes	Yes			4 URM			
Fairfield	Yes	Yes	Yes	1/19/90	5 URM, Pre-1935 with 100+ Occupants	Voluntary strengthening historical buildings are exempt	None included in the ordinance, although Division 88 is referenced in the report to the Commission	# Bldgs with No Progress: 5
Ferndale	Yes				Not Reported			
Fillmore	Yes	Yes			64 URM			# Bldgs with No Progress: 64
Fontana	Yes	Yes	Yes	1/4/90	45 Bearing Wall URM, 32 Nonbearing Wall URM	Notices to owners	None	
Fort Bragg	Yes				4 URM			
Fortuna	Yes	Yes	Yes	12/18/89	1 URM	Structural analysis, mandatory strengthening, Hardship time extensions	1987 Edition of the Uniform Code for Building Conservation as modified	Bldg damaged in April 25, 1992 earthquake and subsequently demolished.
Foster City	Yes	Yes	N/A		0			
Fountain Valley	Yes	Yes	N/A		0			
Fremont	Yes	Yes	Yes	1/9/90	32 URM	Notices to owners	None	Six options are being considered by the City as of June 1991. # Bldgs in Full Compliance: 4 (of which 3 demolished) # Bldgs with No Progress: 28

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Fresno County	Yes	Yes	N/A		0			
Fullerton	Yes	Yes	Yes	2/7/90	82 Nonhistoric URM 43 historic URM 220 Tiltup Concrete	Mandatory strengthening	1987 Edition of the Seismic Safety Commission Model Ordinance for URM buildings, Certain 1988 UCBC sections referenced for tiltup construction	A separate ordinance requires retrofit of pre-1973 tiltup buildings.
Garden Grove	Yes	Yes			12 URM			
Gardena	Yes	No	Yes	3/27/79 1/1/90	20 URM	Mandatory strengthening	Latest UCBC and/or 1990 SSC model ordinance	# Bldgs in Full Compliance: 8 # Bldgs with Plans Submitted: 1 # Bldgs with No Progress: 11
Gilroy	Yes	No	Yes	12/4/89	35 URM	Voluntary strengthening	1985 Edition of the Uniform Code for Building Conservation Appendix Chapter 1, Flat base shear of 10% g, ABK Method	
Glendale	Yes	Yes	Yes	8/22/87	548 URM	Mandatory strengthening	13.3% Base Shear	# Bldgs in Full Compliance: 351 (of which 167 demolished) # Bldgs with Plans Submitted: 57 # Bldgs with No Progress: 140
Glendora	Yes	Yes			14 URM			
Gonzales	Yes	Yes	Yes	11/20/89	3 URM	Voluntary strengthening	1988 (sic) Edition of the Uniform Code for Building Conservation Appendix Chapter 1, 1985 UCBC	Inventory not reported.
Grand Terrace	Yes	Yes	N/A		0			
Greenfield	Yes	Yes	Yes	12/5/89	14 URM	Voluntary strengthening	1988 (sic) Edition of the Uniform Code for Building Conservation Appendix Chapter 1, 1985 UCBC	
Grover City	Yes	Yes	Yes	12/27/89	9 URM	Mandatory strengthening	1987 Edition of the Seismic Safety Commission Model Ordinance as modified	Building for building replacement allowed without having to meet parking standards.

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Guadalupe	Yes	Yes	Yes	12/11/89	40 URM	Notices to owners		Other measures being considered. Draft mandatory ordinance.
Half Moon Bay	Yes	Yes	Yes	11/21/89	2 URM	Owners will be notified by 6/21/90, Voluntary strengthening	1987 Edition of the Uniform Code for Building Conservation Appendix Chapter 1, 1985 UCBC	# Bldgs with Plans Submitted: 1 # Bldgs with No Progress: 1
Hawaiian Gardens	Yes	Yes	N/A		0			
Hawthorne	Yes	Yes	Yes	11/26/90	4 URM	Seismic Retrofits triggered only upon change of use or alterations, Notices to Owners	February 1990 Seismic Safety Commission Model Ordinance	
Hayward	Yes	Yes	Yes	10/16/90	49 URM 130 Tiltup	Mandatory strengthening	Similar to Division 88 City of Los Angeles Code, 1973 Uniform Building Code for Tiltup Retrofits	# Bldgs in Partial Compliance or under Construction: 1 # Bldgs with Permits Issued: 1 # Bldgs with No Progress: 47
Healdsburg	Yes	Yes			26 URM			
Hemet	Yes	Yes			70 URM			
Hercules	Yes	Yes	Yes	Yes	3 URM	Notices to owners		Adoption of a Mandatory program being considered 3/92
Hermosa Beach	Yes	Yes	Yes	Yes	12/21/89	66 URM	Notices to owners	None
Hesperia	Yes	Yes	Yes	Yes	1/8/90	2 URM	Discussions with owners	State Historical Building Code
Hidden Hills	Yes	Yes	Yes	N/A	0			City plans to develop a Historical Structure/Site Ordinance.

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Highland	Yes	Yes	Yes	12/12/89	35 URM, Pre-1935 with 100+ Occupants Pre-1976 with 300+ Occupants	Voluntary strengthening	1987 Edition of the Uniform Code for Building Conservation Appendix Chapter 1 for URM Bldgs, 1973 Edition of the UCBC for Non-URM Buildings, 1985 UCBC	
Hillsborough	Yes	Yes	N/A	0				
Hollister	Yes	Yes	Yes	11/21/90	9 URM	Notices to Owners	Latest Seismic Safety Commission Model Ordinance	# Bldgs in Full Compliance: 2 # Bldgs with No Progress: 7
Holtville	Yes	Yes			4 URM			
Humboldt County	Yes	Yes			7 URM			
Huntington Beach	Yes	Yes	Yes	7/18/79	51 URM	Mandatory strengthening	1976 UCBC, with modified allowable stresses for existing materials	Majority of structures attained compliance through demolition. # Bldgs in Full Compliance: 41 # Bldgs with No Progress: 10
Huntington Park	Yes	Yes	Yes	12/20/89	132 URM	Mandatory strengthening	1985 Edition of Division 88 Los Angeles City Code, and the Los Angeles' Rules for General Application RCA #1-87	# Bldgs in Full Compliance: 83 # Bldgs in Partial Compliance or under Construction: 27 # Bldgs with Permits Issued: 16 # Bldgs with No Progress: 6
Imperial City	Yes	Yes			2 URM			
Imperial County	Yes	Yes	N/A	0				
Indian Wells	Yes	Yes	N/A	0				
Indio	Yes	Yes	Yes	1/29/90	48 URM	Notices to owners	None	
Industry	Yes	No	Yes		4 URM	Mandatory strengthening		

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Inglewood	Yes	Yes	Yes	1987, Revised 1988	54 URM	Mandatory strengthening	Similar to Division 88 City of Los Angeles Code	City reimburses up to \$3000 of the cost of engineering studies, 100% of plan check fees, permits, and taxes, using redevelopment money. # Bldgs in Full Compliance: 26 # Bldgs in Partial Compliance or under Construction: 2 # Bldgs with Permits Issued: 8 # Bldgs with No Progress: 18
Inyo County	Yes				20 URM			
Irvine	Yes	Yes	N/A	0				
Irwindale	Yes	Yes	Yes	Yes	2 URM	Mandatory strengthening	1985 Edition Chapter 96 of the Los Angeles County Code	# Bldgs in Partial Compliance or under Construction: 1 # Bldgs with No Progress: 1
Kern County	Yes	Yes	Yes	Yes	1/8/90	155 URM	Notices to owners	None County staff is available to provide guidance concerning measures to retrofit buildings. # Bldgs with No Progress: 155
King City	Yes	Yes	Yes	Yes	11/28/89	6 URM	Voluntary strengthening	1988 Edition of the Uniform Code for Building Conservation Appendix Chapter 1
Kings County	Yes	Yes	Yes	N/A	0			
La Canada Flintridge	Yes	Yes	Yes	N/A	0			
La Habra	Yes	Yes	Yes	Yes	1/3/88	15 URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance
La Habra Heights	Yes	Yes	Yes	N/A	0			
La Mirada	Yes	Yes	Yes	N/A	0			
La Palma	Yes	Yes	Yes	N/A	0			
La Puente	Yes	Yes	Yes	Yes	21 URM	Mandatory strengthening		

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
La Quinta	Yes	Yes	Yes	12/12/89	7 Non-historic URM 2 Historic URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance	
La Verne	Yes	Yes	Yes	5/15/89	10 URM	Mandatory strengthening, Voluntary Posting	1985 Edition Chapter 96 of the Los Angeles County Code	City budgeted \$100,000 to fund facade / URM program for seismic retrofit in fiscal year 92/93 with goal of completing 2 URM buildings this next fiscal year. One building was completed in 90/91 with agency funding leaving 9 URM buildings remaining.
Lafayette	Yes					Not Reported		# Bldgs in Full Compliance: 2 (of which 1 demolished) # Bldgs with No Progress: 9
Laguna Beach	Yes	Yes	Yes	4/5/90	36 URM	Mandatory strengthening	Similar to Division 88 City of Los Angeles Code	# Bldgs in Full Compliance: 10 # Bldgs in Partial Compliance or Under Construction: 1 # Bldgs with Plans Submitted: 3 # Bldgs with No Progress: 22
Lake County	Yes	Yes	Yes	12/19/89	10 URM	Seismic evaluation reports, posting, bracing of parapets and veneer, full strengthening required at time of major remodel or repairs, mandatory strengthening, historic buildings are exempt	Modified Appendix Chapter 1 of the Uniform Code for Building Conservation, latest edition of the Uniform Building Code	
Lake Elsinore	Yes	Yes	Yes	10/24/89	54 non-historic URM 33 historic URM	Notices to owners	Modified Appendix Chapter 1 of the Uniform Code for Building Conservation	

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Lakeport	Yes	Yes	Yes	2/20/90	33 URM	Seismic evaluation reports, Posting, Bracing of Parapets and Veneer, Full strengthening required at time of major remodel or repairs, Historic Buildings are Exempt	Modified Appendix Chapter 1 of the Uniform Code for Building Conservation, 1985 UBC	
Lakewood	Yes	Yes	N/A	0				
Lancaster	Yes	Yes	Yes	1/16/90	7 URM	Mandatory strengthening	1985 Edition Chapter 96 of the Los Angeles County Code	# Bldgs with No Progress: 7
Larkspur	Yes	Yes			12 URM			
Lawndale	Yes	Yes	Yes		3 URM	Mandatory strengthening	1985 Edition Chapter 96 of the Los Angeles County Code	
Livermore	Yes	Yes	Yes	10/8/90	48 URM	Mandatory strengthening	Modified February 1990 Seismic Safety Commission Model Ordinance	9 bldgs have completed an engineering analysis.
Loma Linda	Yes	Yes	Yes	1/16/90	8 Non-historic URM, 50 Historic URM Pre-1935 with 100+ Occupants Pre-1976 with 300+ Occupants	Voluntary strengthening	1987 Edition of the Uniform Code for Building Conservation Appendix Chapter 1 for URM Bldgs, 1973 Edition of the UBC for Non-URM Buildings, 1985 UBC	# Bldgs in Full Compliance: 2 # Bldgs in Partial Compliance or Under Construction: 1 # Bldgs with Plans Submitted: 4 # Bldgs with No Progress: 41
Lomita	Yes	Yes	Yes	4/14/87	17 URM	Mandatory strengthening	1985 Edition Chapter 96 of the Los Angeles County Code	# Bldgs in Full Compliance: 7 # Bldgs with Permits Issued: 4 # Bldgs with Plans Submitted: 1 # Bldgs with No Progress: 5
Lompoc	Yes	Yes			21 URM			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Long Beach	Yes	Yes	Yes	6/29/71	936 URM bearing and nonbearing wall bldgs all pre-1934	In 1959, the building official was given the authority to abate parapet and appendage falling hazards. In 1971 a mandatory strengthening ordinance was passed, which was amended in 1976 and updated again in 1990.	1970 Edition of the Uniform Building Code, proposed ordinance changes are based on the latest proposed ICBO code change for URM bldgs, and a base shear not to exceed 13 percent but varies with period, building type and occupant load	City created a special assessment district to issue bonds for seismic retrofit financing based on the 1911 Bond Act. # Bldgs in Full Compliance: 639 (of which 304 demolished) # Bldgs with Permits Issued: 197 # Bldgs with Plans Submitted: 90 # Bldgs with No Progress: 10
Los Alamitos	Yes	Yes	N/A	0				Consideration is being given to a more restrictive mandatory strengthening program.
Los Altos	Yes	Yes	Yes	2/20/90	35 URM	Notices to owners, request for voluntary upgrades	None	
Los Altos Hills	Yes	Yes	N/A	0				
Los Angeles City	Yes	Yes	Yes	2/13/81	9354 total URM bldgs, (8222 bearing wall bldgs, 1132 non-bearing wall URM bldgs)	Mandatory strengthening for bearing wall URM bldgs, notices to owners for non-bearing wall URM bldgs, and development of seismic retrofit URM bldgs are guidelines for historic and voluntary rehabilitating of buildings.	1988 edition of Division 88, City of Los Angeles Code with technical amendments which require parts of the ABK Method, in particular demand/capacity and displacement checks for roof diaphragms, Rules for General Application RGA#1-87 is also allowed (based on the ABK Method)	A mandatory strengthening revisions program for non-bearing wall URM bldgs is anticipated in 1993-94. # Bldgs in Full Compliance: 5416 # Bldgs in Partial Compliance or Under Construction: 353 # Bldgs with Permits Issued: 181 # Bldgs w/Plans Submitted: 110 # Bldgs with No Progress: 186
Los Angeles County	Yes	Yes	Yes	4/14/87	278 non-historic URM, 3 historic URM all bearing wall	Mandatory strengthening	1988 Edition Chapter 96 of the Los Angeles County Code - similar to Division 88 of the Los Angeles City Code	# Bldgs in Full Compliance: 185 (of which 8 demolished) # Bldgs in Partial Compliance or under Construction: 34 # Bldgs with Permits Issued: 5 # Bldgs with Plans Submitted: 23 # Bldgs with No Progress: 34

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Los Gatos	Yes	Yes	Yes	11/6/89, 27/90	15 non-historic URM 6 historic URM	Mandatory repair and retrofit for all damaged URM bldgs, engineer's analysis is required for undamaged URM bldgs. A subsequent ordinance requires mandatory strengthening for undamaged URM bldgs	1991 Edition of the Uniform Code for Building Conservation, 75% of the 91 UBC for the repair of earthquake-damaged non-URM bldgs, Chapter 37 of the 91 UBC for chimney repair	Revocation of occupancy for buildings that do not comply with deadline. City allows replacement of damaged buildings without providing more parking. # Bldgs in Full Compliance: 13 # Bldgs in Partial Compliance or under Construction: 4 # Bldgs with No Progress: 4
Lynwood	Yes				15 URM			
Mammoth Lakes	Yes	Yes	N/A		0			
Manhattan Beach	Yes	No	Yes	9/19/89	Not Reported	Structural analysis, Mandatory strengthening by order from the city	Similar to Division 88 Los Angeles City Code	No inventory Provided.
Maricopa	No				Not Reported			
Marin County	Yes	Yes	Yes	12/22/89	1 URM	Notice to owner with an order to strengthen or demolish	None	
Marina	Yes	Yes	N/A		0			
Martinez	Yes	Yes	Yes		58 URM	Notices to Owners	Standards are planned to be adopted	
Maywood	Yes	Yes	Yes	10/30/84	25 URM	Mandatory strengthening	Similar to 1982 Edition of Division 88 of the Los Angeles City Code	# Bldgs in Full Compliance :21 # Bldgs with Permits Issued: 2 # Bldgs with No Progress: 2
McFarland	Yes	Yes			16 URM			
Mendocino County	Yes	Yes			5 URM			
Menlo Park	Yes	Yes	Yes	9/4/90	2 Nonhistoric URM	Voluntary strengthening	1985 Uniform Building Code, State Historical Building Code	Currently reviewing seismic study for one URM site. # Bldgs with No Progress: 2

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Mill Valley	Yes	Yes	Yes	Yes	3/5/90	18 URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance
Millbrae	Yes	Yes	Yes	Yes	11/28/89	3 URM	Voluntary strengthening	1985 Edition of Division 88 of the Los Angeles City Code as modified, 1985 UBC # Bldgs in Full Compliance: 2 # Bldgs in Partial Compliance or under Construction: 1
Milpitas	Yes	Yes	Yes	Yes	1/1/90	1 URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance, 1988 Edition of the Uniform Code for the Abatement of Dangerous Bldgs Strengthening deadline is negotiable depending on owner's financial situation. # Bldgs with Permits Issued: 1
Mission Viejo	Yes	Yes	Yes	N/A	0			
Mono County	Yes	Yes	Yes		8 URM			
Monrovia	Yes	Yes	Yes	Yes	6/25/90	75 URM	Mandatory strengthening	Wall anchorage, parapet bracing and height to thickness requirements only # Bldgs in Full Compliance : 29 # Bldgs with Permits Issued: 13 # Bldgs with Plans Submitted:19 # Bldgs with No Progress: 14
Montclair	Yes	Yes	Yes	N/A	0			
Monte Sereno	Yes	Yes	Yes	N/A	0			
Montebello	Yes	Yes	Yes	Yes	4/29/89	20 URM	Mandatory strengthening	Similar to the 1985 Edition of Chapter 96 of the Los Angeles County Code
Monterey City	Yes	Yes	Yes	Yes	2/20/90	60 URM	Voluntary Strengthening, Historical Buildings are exempt	Similar to the 1987 Edition of the Uniform Code for Building Conservation Appendix Chapter 1, 1988 UBC for base shear
Monterey County	Yes	Yes				1 URM		
Monterey Park	Yes	Yes	Yes	Yes	5/11/87	26 URM	Mandatory strengthening	Similar to 1987 Edition Seismic Safety Commission Model Ordinance

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Moorpark	Yes	Yes	Yes	Yes	7 URM			
Moraga	Yes	Yes	N/A		0			
Moreno Valley	Yes	Yes	N/A		0			
Morgan Hill	Yes	Yes	Yes	1984	5 Non-historic URM, 2 historic URM	Mandatory Strengthening	1982 Edition of the Los Angeles City Code	This emergency ordinance was passed to repair and retrofit earthquake damaged URM bldgs.
Morro Bay	Yes	Yes	Yes	12/11/89	46 URM	Mandatory strengthening	Similar to 1987 Edition Seismic Safety Commission Model Ordinance	
Mountain View	Yes	Yes	Yes	10/1/89	25 non-historic URM	Notices to Owners, retrofits are triggered upon remodel or renovation	Uniform Code for Building Conservation, Appendix Chapter 1	Drafting an ordinance for late summer that will require mandatory evaluation and upgrade within defined time period to be approved by city council.
Napa	Yes	Yes						# Bldgs with No Progress: 25
Napa County	Yes	Yes						# Bldgs with No Progress: 7
Newark	Yes	Yes	N/A		0			
Newport Beach	Yes	Yes	Yes	12/11/89	124 Non-historic URM, 3 historic URM	Mandatory strengthening	Current Edition of the Uniform Code for Building Conservation	# Bldgs in Full Compliance: 86 # Bldgs in Partial Compliance or under Construction: 12 # Bldgs with Permits Issued: 8 # Bldgs with Plans Submitted: 7 # Bldgs with No Progress: 14
Norco	Yes	Yes	Yes		3 URM			
Norwalk	Yes	Yes			11 URM			
Novato	Yes	Yes			1 URM			
Oakland	Yes	Yes	Yes	1/10/91	1546 Non-historic URM, 120 Historic URM	Notices to Owners	Uniform Code for Building Conservation Appendix Chapter 1 and 75 percent of current Uniform Building Code for nonbearing wall URM buildings	

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Oceanside	Yes	Yes	Yes	Yes	5/24/91	86 non-historic URM 2 historic URM	Mandatory strengthening	36 URM's have received services of order as of 11/22/91
Ojai	Yes	Yes	Yes	Yes	2/15/90, 7/1/91	29 URM	Notices to owners, Mandatory strengthening	Yes-type not reported # Bldgs in Full Compliance: 16 # Bldgs in Partial Compliance or under Construction: 2 # Bldgs with Plans Submitted: 3 # Bldgs with No Progress: 8
Ontario	Yes	Yes	Yes	Yes		65 URM		# Bldgs with No Progress: 65
Orange City	Yes	Yes	Yes	Yes	1/25/90	35 Non-historic URM 43 Historic URM	URM ordinance 7-92	# Bldgs in Partial Compliance / Under Construction : 2 # Bldgs with No Progress: 76
Orange County	Yes	Yes				22 URM		
Orinda	Yes	Yes	Yes	N/A		0		
Oxnard	Yes	Yes	Yes			53 URM		
Pacific Grove	Yes	Yes	Yes	Yes	12/5/90	8 historic URM 3 non-historic URM	Voluntary strengthening, including all pre-1976 occupancy buildings	Division 88 City of Los Angeles Code
Pacifica	Yes	Yes	Yes	N/A		0		
Palm Desert	Yes	Yes	Yes	N/A		0		
Palm Springs	Yes	Yes	Yes	Yes		11 Non-historic URM 15 historic URM	Mandatory strengthening	Modified 1987 Edition of the Seismic Safety Commission Model Ordinance # Bldgs in Full Compliance: 9 # Bldgs in Partial Compliance or under Construction: 2 # Bldgs with Permits Issued: 10 # Bldgs with Plans Submitted: 4 # Bldgs with No Progress: 1

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Palmdale	Yes	Yes	N/A		0			
Palo Alto	Yes	Yes	Yes	1/20/86	49 URM, 29 Pre-1935 bldgs with 100 or more occupants, 21 pre-76 bldgs with 300 or more occupants	Voluntary strengthening	UCBC Appendix Chapter 1 for URM buildings, 1973 UBC for non-URM buildings	Additions to strengthened buildings are allowed, parking requirements are waived.
Palos Verdes Estates	Yes	Yes	Yes		2 URM	Mandatory strengthening	SSC Model Ordinance	# Bldgs in Full Compliance: 1 # Bldgs in Partial Compliance or under Construction: 1
Paramount	Yes	No	Yes	2/16/90	7 URM	Notices to owners by 2/28/90, Mandatory Strengthening	Chapter 96 County of Los Angeles	
Pasadena	Yes	Yes	Yes		519 URM	Notices to owners		
Paso Robles	Yes	Yes			58 URM			Mitigation program proposed for review Sept. 92. # Bldgs with No Progress: 58
Perris	Yes	Yes	Yes		17 URM			
Petaluma	Yes	Yes	Yes	12/11/89, 9/20/91	35 Non-historic URM 32 Historic URM 5 pre-1934 concrete bldgs	Notices to owners, owners advised to notify tenants/ Mandatory strengthening -Bolts only (adopted in 1991) 12/11/89	None	
Pico Rivera	Yes	Yes	Yes	1/90	6 URM	Mandatory strengthening	Uniform Code for Building Conservation Appendix Chapter 1, 1987 Edition	# Bldgs in Full Compliance: 2 # Bldgs with Permits Issued: 4
Piedmont	Yes	Yes	N/A		0			
Pinole	Yes	Yes			10 URM			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Pismo Beach	Yes	Yes	Yes	12/11/89 Amended 6-2-92	39 URM	Mandatory strengthening	UCBC Appendix Chapter 1	Deadlines for strengthening extended to July 11, 1995. # Bldgs in Full Compliance: 5 # Bldgs with Permits Issued: 1 # Bldgs with Plans Submitted: 4 # Bldgs with No Progress: 29
Pittsburg	Yes	Yes			38 URM			
Placentia	Yes	Yes	Yes	11/30/89	16 URM	Voluntary strengthening, owner notification not specified. Seismic retrofit is mandatory upon change in use, application for any building permit or use permit, or development plan	None	City is requesting additional commercial rehabilitation loan funds.
Pleasant Hill	Yes	Yes	Yes	N/A	0			
Pleasanton	Yes	Yes			36 URM			
Point Arena	Yes				Not Reported			
Pomona	Yes	Yes			96 URM			
Port Hueneme	Yes	Yes	N/A	N/A	0			
Portola Valley	Yes	Yes	N/A	N/A	0			
Poway	Yes	Yes			1 URM			
Rancho Cucamonga	Yes	Yes	Yes	3/21/90	22 Non-historic URM 18 historic URM	Mandatory strengthening	1982 Edition of Division 88 Los Angeles City Code, State Historical Building Code as modified	A pamphlet was developed explaining various options and incentives, CDBG funds for design consultation, redevelopment funds., City is considering a local bond program, encourages Mills Act, allows fee waivers.
Rancho Mirage	Yes	Yes	N/A	N/A	0			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Rancho Palos Verdes	Yes	Yes	N/A		0			
Redlands	Yes	Yes	Yes	2/7/90	86 Non-historic URM 11 historic URM	Notices to owners	None	
Redondo Beach	Yes	Yes	Yes	3/7/90	20 URM	Mandatory strengthening		
Redwood City	Yes	Yes	Yes	1/1/90	29 non-historic URM 4 historic URM			
Rialto	Yes	Yes	Yes	3/15/90	19 URM	Mandatory	None	
Richmond	Yes	Yes			70 URM			
Ridgecrest	Yes	Yes	N/A		0			
Rio Dell	Yes				Not Reported			
Rio Vista	Yes				46 URM			
Riverside City	Yes	Yes	Yes	4/23/91	244 URM	Voluntary strengthening		
Riverside County	Yes	Yes	Yes	4/28/92	3 URM	Notices to owners. Retrofit plans required in 180 days.	None	
Rohnert Park	Yes	Yes	N/A		0			
Rolling Hills	Yes	Yes	N/A		0			
Rolling Hills Estates	Yes	Yes	N/A		0			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Rosemead	Yes	Yes	Yes	12/29/89	6 URM	Mandatory strengthening	1985 Edition of Chapter 96 Los Angeles County	# Bldgs in Full Compliance: 1 # Bldgs demolished # Bldgs in Partial Compliance or under Construction: 1 # Bldgs with Plans Submitted: 1 # Bldgs with No Progress: 3
Ross	Yes	Yes	Yes	3/8/90	1 URM	Mandatory strengthening	Uniform Code for Building Conservation appendix Chapter 1	
Saint Helena	Yes	Yes	Yes	1/3/90	28 Historic URM	Notices to owners	None	
Salinas	Yes	Yes	Yes	10/26/90	70 URM	Mandatory strengthening	Uniform Code for bldg Conservation, 1991 Edition	
San Anselmo	Yes	Yes	Yes	12/12/90	21 URM	Mandatory strengthening	UCBC Appendix Chapter 1, State Historical Building Code	# Bldgs in Full Compliance : 1 # Bldgs in Partial Compliance or under Construction: 1 # Bldgs with Plans Submitted: 1 # Bldgs with No Progress: 18
San Benito County					6 URM			
San Bernardino City	Yes	Yes	Yes	Yes	202 URM	1990 ordinance requires seismic hazard evaluations, A1983 retrofit ordinance will require strengthening within 4-11 years.	1982 Edition of Division 88 Los Angeles City Code	Mitigation program currently under revision to adopt UCBC Appendix 1 and to extend deadlines. # Bldgs in Full Compliance: 3 # Bldgs in Partial Compliance or under Construction: 1 # Bldgs with Permits Issued: 5 # Bldgs with Plans Submitted: 1 # Bldgs with No Progress: 196
San Bernardino County	Yes	Yes	Yes	Yes	3/12/90	21 URM	Notices to owners	None
San Bruno	Yes	Yes	Yes	1/90	5 URM	Voluntary strengthening	Similar to UCBC Appendix Chapter 1	

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
San Carlos	Yes	Yes	Yes	Yes	11/13/89	10 URM	Voluntary strengthening	Division 88 Los Angeles City Code 1985 Edition, Uniform Code for Building Conservation is also allowed on a case by case basis
San Clemente	Yes	Yes			2 URM			# Bldgs with No Progress: 2
San Diego County	Yes	No	Yes	Yes	2/91	29 Nonhistoric URM 4 historic URM	Mandatory strengthening	February 1990 Edition Seismic Safety Commission Model Ordinance
San Dimas	Yes	Yes			8 URM			
San Fernando	Yes	Yes	Yes	Yes	12/19/89	12 URM Non-historic	Mandatory strengthening	1985 Revised Edition of Division 88 City of Los Angeles Code with ABK Modifications
San Francisco	Yes	No	Yes	Yes	12/29/90	2080 URM Bearing Wall Only	Notices to owners, Seismic retrofit required upon increases in occupancy, alterations or additions.	A task force has been formed to recommend ways to expand the current mitigation program. An ordinance is now under consideration. Plans to inventory and include nonbearing wall URM buildings have been delayed. A general obligation bond program has been placed by the Board of Supervisors on the November ballot. Should it pass, mandatory URM building retrofit will be required.
San Gabriel	Yes	Yes	Yes	Yes	12/7/89	63 URM	Mandatory strengthening	1985 Edition of Division 88 Los Angeles City Code
San Jacinto	Yes	Yes	Yes	N/A		17 URM		
San Joaquin County	Yes	Yes	Yes	N/A	0			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
San Jose	Yes	Yes	Yes	6/20/89 5/16/91	196 URM	1991 Ordinance is Mandatory strengthening. An earlier ordinance required structural report, and allowed the City to abate dangerous buildings or otherwise cause hazards to be reduced	1991 Ordinance is similar to the Uniform Code for Building Conservation Appendix Chapter 1 1991 Edition. The 1985 Uniform Building Code is also referenced. Earlier ordinance specified 25 Percent of the 1973 Uniform Building Code, Earthquakes of varying magnitude	City has redevelopment fund grants for engineering design work. 47 URM buildings have already been retrofitted according to the earlier ordinance or they have or will be demolished.
San Juan Bautista	Yes	Yes			13 URM			
San Juan Capistrano	Yes	Yes			36 URM			
San Leandro	Yes	Yes	Yes	12/27/89 2/4/90	59 URM	Notices to owners, mandatory strengthening	1988 Edition of Division 88 City of Los Angeles Code	Arranging for loans and waiving loan fees, hiring a financial consultant, \$165,000 financing program to pay for initial hazard evaluation of private buildings, reduced permit fees, and expedited reviews . City is considering a project management program to hire a single design professional for a group of buildings.
San Luis Obispo City	Yes	Yes	Yes		148 URM			
San Luis Obispo County	Yes	Yes	Yes	11/3/89 1992	65 URM	Mandatory	UCBC, Appendix Chapter 1	# Bldgs in Full Compliance: 2 # Bldgs with No Progress: 63
San Marcos	Yes	Yes	Yes	12/13/89	13 URM	1 URM	Seismic Safety Commission 1987 Model Ordinance	Program consists of a resolution
San Marino	Yes	Yes	Yes					Notices to owners, required engineering inspection, written report, City reserves right to impose standards

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
San Mateo City	Yes	Yes	Yes	1/3/90	28 URM	Mandatory strengthening	1987 Edition Seismic Safety Commission Model Ordinance	Category II buildings are not yet required to submit. All category I buildings have achieved some level of compliance. # Bldgs in Full Compliance: 1 # Bldgs in Partial Compliance or under Construction: 5 # Bldgs with Permits Issued: 12 # Bldgs with Plans Submitted: 10
San Mateo County	Yes	Yes	Yes	3/2/90	3 non-historic URM	Voluntary strengthening, engineer's structural report, notices to owners, Change of use/occupancy, demolition	1985 Edition of Division 88, 1973 UBC for non bearing wall URM buildings, State Historical Building Code	Program does not include an ordinance, recommends strengthening within three years otherwise a mandatory strengthening ordinance will be considered.
San Pablo	Yes				6 URM			
San Rafael	Yes	Yes	Yes	6/25/90	50 URM	Voluntary strengthening	1990 Edition of the Seismic Safety Commission Model Ordinance	# Bldgs with Permits Issued: 1 # Bldgs with No Progress: 49
San Ramon	Yes	Yes	Yes	N/A	0			
Sand City	Yes	Yes	Yes	N/A	0			
Santa Ana	Yes	Yes	Yes	2/19/80	207 URM	Mandatory strengthening	Similar to Division 88, 1982 Edition Los Angeles City Code	City used Marks Bond Act funds for historical buildings. # Bldgs in Full Compliance: 189 # Bldgs with No Progress: 18
Santa Barbara City	Yes	Yes	Yes	8/15/89	203 URM	Mandatory strengthening, implemented in a district by district manner	Modified 1987 UCBC Appendix Chapter 1, Wall height to thickness ratios and in-plane shear may be modified for Moderate Risk buildings	Holding a seminar for contractors and building inspectors. # Bldgs in Full Compliance: 45 # Bldgs in Partial Compliance or under Construction: 3 # Bldgs with Permits Issued: 39 # Bldgs with Plans Submitted: 6 # Bldgs with No Progress: 110

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Santa Barbara County	Yes	Yes	Yes	1/2/90	20 Non-Historic URM 2 Historic URM	Notices to owners, upon change of use or occupancy	UCBC	The county is proposing a mandatory strengthening ordinance based on the 1991 UCBC. Hearings are scheduled for July 1992. # Bldgs with Plans Submitted: 4 # Bldgs with No Progress: 18
Santa Clara City	Yes	Yes	Yes		24 URM	Voluntary strengthening - first of three phases		3% Interest loans to fund engineering analysis with a 5 year payback. # Bldgs in Full Compliance: 5 (of which 2 demolished) # Bldgs in Partial Compliance or under Construction: 1 # Bldgs with Plans Submitted: 6 # Bldgs with No Progress: 12
Santa Clara County	Yes	Yes	Yes	12/12/89	59 URM	Mandatory strengthening, except for owners of more than two buildings who may set their own time frames for compliance	1987 Seismic Safety Commission Model Ordinance	Exception was made for Stanford University which can establish its own time frames for compliance. # Bldgs in Full Compliance: 9 # Bldgs with Plans Submitted: 46 # Bldgs with No Progress: 46
Santa Clarita	Yes	Yes	Yes	8/11/88	4 URM	Mandatory strengthening	1985 Edition Chapter 96 Los Angeles County Code	# Bldgs in Full Compliance: 3 # Bldgs in Partial Compliance or under Construction: 1
Santa Cruz City	Yes	Yes	Yes	11/28/8911 / 28/89	24 Historic URM, 22 Non-historic URM	Notices to owners of undamaged buildings, A second ordinance established standards for repair of damaged others were severely damaged in Loma Prieta Earthquake	1987 UCBC Appendix Chapter A1, 1970 UBC for non-URM buildings for the repair ordinance These standards do not apply to undamaged URM buildings	Loma Prieta Earthquake damage prompted passage of two ordinances, A 1987 hazard reduction ordinance failed to pass.
Santa Cruz County	Yes	Yes	Yes		N/A			
Santa Fe Springs	Yes	Yes	Yes		N/A			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Santa Maria	Yes	Yes	Yes	1981 12/5/89	27 nonhistoric URM	Originally only applicable to a certain district of the city, affecting 8 buildings, of those 6 were retrofitted, partial Mandatory strengthening	1989 Ordinance is based on the 1987 Edition of the Seismic Safety Commission Model Ordinance	Original ordinance specified 75% of Division 88 City of Los Angeles Code Design Forces
Santa Monica	Yes	Yes	Yes	1975 4/14/81 7/25/89	252 URM	Inventory and Notices placed on Property Deeds in 1977/78, Wall Anchors required in 1981, Structural Engineer's Report 1989, Voluntary strengthening	1915 or 1921 Santa Monica Building Code for Wall Anchors in the 1981 Ordinance, 1985 Uniform Building Code for the reports in the 1989 Ordinance	About 50% of the City's total URM inventory SF has been resolved to date. Council will consider adopting the State model Ordinance for remaining 124 URMs in 8/92. # Bldgs in Full Compliance :118 (of which 24 demolished) # Bldgs in Partial Compliance or Under Construction: 10 # Bldgs w/Plans Submitted:124
Santa Paula	Yes	Yes	Yes	11/19/90	119 non-historic URM, 2 historic URM	Notices to Owners	Owners may analyze URM buildings according to 1991 Uniform Code for Bldg Conservation, Appendix Chapter 1	# Bldgs in Full Compliance : 4 # Bldgs No Progress: 117
Santa Rosa	Yes	Yes	Yes	10/12/71	68 URM	Requires preliminary review, property owner review, retrofit or demolition		
Saratoga	Yes	Yes	Yes	N/A	0			
Sausalito	Yes	Yes	Yes		10 URM			# Bldgs in Full Compliance: 1 # Bldgs in Partial Compliance or Under Construction: 1 # Bldgs with No Progress: 8
Scotts Valley	Yes	Yes	Yes	N/A	0			
Seal Beach	Yes				10 URM			
Seaside	Yes	Yes	Yes	5/3/90	25 URM	Posting, Voluntary strengthening	Similar to the 1987 Safety Commission Model Ordinance	

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Sebastopol	Yes	Yes	Yes	Yes	25 URM	Council Policy 11A Lottery for building owners		# Bldgs in Full Compliance: 20 # Bldgs in Partial Compliance or under Construction: 2 # Bldgs with No Progress: 3
Shafters	Yes	Yes	Yes	Yes	12/19/89	27 URM	Notices to owners	None
Sierra Madre	Yes	Yes	Yes	Yes	1/12/89	51 URM	Mandatory strengthening	Division 88 1985 Edition # Bldgs in Full Compliance: 8 (of which 6 demolished) # Bldgs in Partial Compliance or under Construction: 2 # Bldgs with Permits Issued: 2 # Bldgs with Plans Submitted: 4 # Bldgs with No Progress: 35
Signal Hill	Yes	Yes	Yes	N/A	0			
Simi Valley	Yes	Yes	Yes	Yes	1/8/90	2 URM - both historic	Mandatory strengthening	1987 Seismic Safety Commission Model Ordinance
Solano County	Yes	Yes	Yes	Yes	2 URM			
Soledad	Yes	Yes	Yes	Yes	11/29/89	4 URM	Voluntary strengthening	UCBC Appendix Chapter 1 1987 Edition # Bldgs with No Progress: 4
Solvang	Yes	Yes	Yes	Yes	6/28/90	3 URM	Notices to Owners	None # Bldgs with No Progress: 3
Sonoma City	Yes	Yes	Yes	Yes	10/17/90	29 Historic URM, 22 non-historic URM	Mandatory strengthening	Similar to the Santa Rosa Program \$2 per square foot reimbursement to owner for cost of developing upgrading plans. Community redevelopment agency pays for cost of URM upgrading permits.
Sonoma County	Yes	Yes	Yes	Yes	4/19/90	174 URM	Notices to owners	UCBC, Appendix Chapter 1 Draft ordinance being reviewed.
South El Monte	Yes	Yes	Yes	N/A	0			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
South Gate	Yes	Yes	Yes	2/23/87	40 URM	Mandatory strengthening	1987 Edition of Seismic Safety Commission Model Ordinance	# Bldgs in Full Compliance: 26 # Bldgs with No Progress: 14
South Pasadena	Yes	Yes	Yes	1986	32 URM	Mandatory strengthening	1982 Edition of Division 88 City of Los Angeles Code	
South San Francisco	Yes	Yes			20 URM			
Stanton	Yes	Yes	N/A	0				
Suisun City	Yes	Yes			15 URM			
Sunnyvale	Yes	Yes	Yes	10/31/89	86 URM	Notices to owners Educational material, Voluntary engineering Reports, Review by city after one year	None	
Taft	Yes	Yes			42 URM			# Bldgs with No Progress: 42
Tehachapi	Yes	Yes			9 URM			
Temple City	Yes	Yes	Yes	6/7/88	6 URM	Mandatory strengthening	Chapter 96 of the Los Angeles County Code 1985 Edition	
Thousand Oaks	Yes	Yes	N/A	0				
Tiburon	Yes	Yes			1 URM			# Bldgs in Full Compliance : 1
Torrance	Yes	Yes	Yes	12/15/87	50 URM	Mandatory strengthening 85% of the Bldgs have or are in process of retrofit	1982 Edition of Division 88 Los Angeles City Code	City funded a subsidy to pay for the engineering analysis at \$0.50/Sq. Ft. Formed Assessment district for owners that choose to join.
Tulare	Yes							# Bldgs in Full Compliance :43 # Bldgs with Permits Issued: 3 # Bldgs with Plans Submitted: 4

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Tustin	Yes	Yes	Yes	2/19/91	8 URM	Mandatory strengthening	1990 Seismic Safety Commission Model Ordinance	Community Development Block Grants for up to \$2000 provided for engineering costs. # Bldgs in Full Compliance: 1 # Bldgs in Partial Compliance or under Construction: 2 # Bldgs with No Progress: 5
Twenty-nine Palms	Yes	Yes	Yes	1/22/90	27 URM	Voluntary strengthening, Engineers structural report, Letters of Intent, Demolition for unsatisfactory progress, Historical Buildings are exempt	1985 Edition of Division 88 as modified for URM Buildings, 1973 UBC for non-URM Bearing Wall Bldg	
Ukiah	Yes	Yes	Yes	12/20/89	51 non-historic URM 24 historic URM	Engineer's structural report, Posting, If strengthening not feasible then demolition	State Historical Building Code, specify Richter magnitude of an earthquake building can withstand after strengthening without damage	3% Loans up to \$4,000 and 10 year terms for evaluation reports from redevelopment funds.
Union City	Yes	Yes	Yes		7 URM			
Upland	Yes	Yes	Yes	12/11/89	58 URM, Pre-1935 with 100 + Occupants Pre-1976 with 300 + Occupants	Voluntary strengthening requires engineering reports, and letters of intent	Latest Edition of Division 88 of the Los Angeles City Code, the 1973 UBC for non-URM buildings, and City Ordinance #1470 January 1990.	\$2 million Commercial Rehabilitation Loan Program - loans at market rate, Architectural Engineering and loan packaging. # Bldgs in Full Compliance: 10 # Bldgs in Partial Compliance or under Construction: 4 # Bldgs with Permits Issued: 4 # Bldgs with Plans Submitted: 6 # Bldgs with No Progress: 34
Vacaville	Yes	Yes	Yes	12/19/90	7 non-historic URM, 14 historic URM	Notices to Owners		# Bldgs in Full Compliance: 1 # Bldgs in Partial Compliance or under Construction: 1 # Bldgs with Plans Submitted: 6 # Bldgs with No Progress: 19

City or County	Inventory Started	Inventory Completed	Mitigation Program Established	Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
Vallejo	Yes	Yes	Yes	Yes	1/30/90	56 Non-historic URM & Historic URM	Voluntary strengthening	\$40,000 per building maximum CDBG loan
Ventura City	Yes	Yes	Yes	11/25/91	145 URM	Mandatory Parapet	UCBC	Similar to the Uniform Code for Building Conservation Appendix Chapter 1 Environmental Impact Study done. 2 ordinances adopted and 1 policy resolution. # Bldgs in Full Compliance: 9 # Bldgs in Partial Compliance / Under Construction : 1 # Bldgs with Plans Submitted: 2 # Bldgs with No Progress: 133
Ventura County	Yes	Yes	Yes	7/24/90	19 URM	Mandatory strengthening	February 1990 Seismic Safety Commission Model Ordinance	
Vernon	Yes	Yes	Yes	11/26/90	37 URM	Notices to Owners, Owners are requested to voluntarily upgrade their buildings upon changes of occupancy or no later than 2 years	Uniform Code for Building Conservation	
Victorville	Yes	Yes	Yes	12/6 URM	Notices to Owners, Owners are requested to voluntarily upgrade their buildings upon changes of occupancy or no later than 2 years			
Villa Park	Yes	Yes	N/A	N/A	0			
Vista	Yes	Yes	Yes	Yes	2 URM	Voluntary strengthening	None reported	# Bldgs Strengthened: 1 # Bldgs with No Progress: 1 (adobe bldg)
Walnut	Yes	Yes	Yes	N/A	0			
Walnut Creek	Yes	Yes	Yes	Yes	6/90	12 URM	Mandatory strengthening	Modified Version of the 1987 Seismic Safety Commission Model Ordinance - Also allows the Uniform Code for Building Conservation, Appendix Chapter 1, 1991 Version # Bldgs in Partial Compliance or under Construction: 2 # Bldgs with Plans Submitted: 9 # Bldgs with No Progress: 1
Wasco	Yes	Yes	Yes	Yes	12/8/89	27 URM	Notices to owners	None
Watsonville	Yes				60 URM			

City or County	Inventory Started	Inventory Completed	Mitigation Program Established		Adoption Date	Number and Type of Bldgs	Type of Mitigation Program	Technical Mitigation Standards	Hazard Reduction Progress and Remarks
			Mitigation Program Established	Type of Mitigation Program					
West Covina	Yes	Yes	Yes	11/8/89	1 URM	Notice to owner Engineers report	Not Indicated		
West Hollywood	Yes	Yes	Yes	12/18/895/1 6/90	81 Non-historic URM 20 Historic URM	Mandatory strengthening	1988 Edition of Chapter 96 of the Los Angeles County Code as modified, Also accepts the 1984 ABK Methodology Report	Amended the rent control program to allow rent increases, \$7100 per bldg Community Development Block Grant funds, housing rehabilitation program of \$10,000 per building, reduction or waiver of fees, zoning incentives.	
Westlake Village	Yes	Yes	N/A	N/A	0				
Westminster	Yes	Yes	N/A	N/A	0				
Westmoreland	Yes	Yes	Yes	8/2/90	2 URM	Mandatory strengthening	1988 Edition of Chapter 96 of the Los Angeles County Code		
Whittier	Yes	Yes	Yes	4/90	12 URM	Mandatory strengthening.	Draft Model Ordinance (Division 88)	Notices served 5/92. # Bldgs with No Progress: 12	
Willits	Yes	Yes	Yes	1/30/90	7 Non-historic URM 2 Historic URM	Engineer's report Notices to owners Posting of buildings			
Woodside	Yes	Yes	N/A	N/A	0				
Yorba Linda	Yes	Yes	Yes	1/5/90	2 URM	Mandatory strengthening analysis required by structural engineer	Similar to 1982 Edition of Division 88	# Bldgs in Full Compliance: 1 # Bldgs with Plans Submitted: 1	
Yountville	Yes	Yes	Yes	11/20/90	9 URM	Notices to owners	None		
Yucaipa	Yes	Yes	Yes	12/27/89	45 URM	Notices to owners	None	Draft ordinance proposes adoption of UCBC App. Chapter 1 and a voluntary strengthening plan. # Bldgs in Full Compliance: 9 # Bldgs in Partial Compliance or Under Construction: 1 # Bldgs with Plans Submitted: 1 # Bldgs with No Progress: 34	

APPENDIX B

Survey of Uses for URM Buildings (Based on 110 jurisdictions)

<u>Primary Use</u>	<u>Total #</u>	<u>Percentage</u>	<u>Structure</u>	<u>Total #</u>	<u>Percentage</u>
Retail	2,299	17.1%	Bearing Walls	11,618	86.5%
Office	793	5.9%	Steel Frame	16	0.1%
Residential	238	1.8%	Concrete Frame	150	1.1%
School: Pre-School	16	0.1%	Other	1,016	7.6%
School: K-12	40	0.3%	Undefined	635	4.7%
School: College	10	0.1%			
Hotel	95	0.7%			
Restaurant	380	2.8%			
Theater	87	0.6%			
Industrial	258	1.9%			
Warehouse	214	1.6%			
Garage	141	1.0%			
Public Utility	37	0.3%			
Hospital	28	0.2%			
Police Department	4	0.0%			
Fire Department	29	0.2%			
Jail	6	0.0%			
Church	155	1.2%			
Other	334	2.5%			
Undefined	8,271	61.6%			
Total	13,436	100.0%	Total	13,436	100.0%

Survey of URM Building Progress (Based on 104 jurisdictions)

<u>Stages of Progress</u>	<u>Total URM</u> s	<u>Percentage</u>
Full Compliance	7,469	49%
Partial Compliance	558	4%
Permits Issued	550	4%
Plans Submitted	551	4%
No Progress	2,948	19%
Undefined	3,127	21%
Total	15,182	100%

Appendix C

Chapter 12.2 Building Earthquake Safety

Chapter 12.2 was added by Stats. 1986, c. 250, § 2.

§ 8875. Definitions

Unless the context otherwise requires, the following definitions shall govern the construction of this chapter:

(a) "Potentially hazardous building" means any building constructed prior to the adoption of local building codes requiring earthquake resistant design of buildings and constructed of unreinforced masonry wall construction. "Potentially hazardous building" includes all buildings of this type, including, but not limited to, public and private schools, theaters, places of public assembly, apartment buildings, hotels, motels, fire stations, police stations, and buildings housing emergency services, equipment, or supplies, such as government buildings, disaster relief centers, communications facilities, hospitals, blood banks, pharmaceutical supply warehouses, plants, and retail outlets. "Potentially hazardous building" does not include any building having five living units or less. "Potentially hazardous buildings" does not include, for purposes of subdivision (a) of Section 8877, any building which qualifies as "historical property" as determined by an appropriate governmental agency under Section 37602 of the Health and Safety Code.

(b) "Local building department" means a department or agency of a city or county charged with the responsibility for the enforcement of local building codes.

§ 8875.1 Establishment of program; identification of potentially hazardous buildings; advisory report

A program is hereby established within all cities, both general law and chartered, and all counties and portions thereof located within seismic zone 4, as defined and illustrated in Chapter 2-23 of Part 2 of Title 24 of the California Administrative Code, to identify all potentially hazardous buildings and to establish a program for mitigation of identified potentially hazardous buildings.

By September 1, 1987, the Seismic Safety Commission, in cooperation with the League of California cities, the County Supervisors Association of California and California building officials, shall prepare an advisory report for local jurisdictions containing criteria and procedures for purposes of Section 8875.2.

(Formerly § 8876, added by Stats. 1986, c. 250, § 2. Renumbered § 8875.1 and amended by Stats. 1987, c 56, § 62.)

§8875.2 Local building departments; participation in mitigation programs; reports

Local building departments shall do all of the following:

(a) Identify all potentially hazardous buildings within their respective jurisdiction on or before January 1, 1990. This identification shall include current building use and daily occupancy load. In regard to identifying and inventorying the buildings, the local building departments may establish a schedule of fees to recover the costs of identifying potentially hazardous buildings and carrying out this chapter.

(b) Establish a mitigation program for potentially hazardous buildings to include notification to the legal owner that the building is considered to be one of a general type of structure that historically has exhibited little resistance to earthquake motion. The

mitigation program may include the adoption by ordinance of a hazardous buildings program, measures to strengthen buildings, measures to change the use to acceptable occupancy levels or to demolish the building, tax incentives available for seismic rehabilitation, low-cost seismic rehabilitation loans available under Division 32 (commencing with Section 5500) of the Health and Safety Code, application of structural standards necessary to provide for life safety above current code requirements, and other incentives to repair the buildings which are available from federal, state, and local programs. Compliance with an adopted hazardous buildings ordinance or mitigation program shall be the responsibility of building owners.

Nothing in this chapter makes any state building subject to a local building mitigation program or makes the state or any local government responsible for paying the cost of strengthening a privately owned structure, reducing the occupancy, demolishing a structure, preparing engineering or architectural analysis, investigation, or design, or other costs associated with compliance of locally adopted mitigation programs.

(c) By January 1, 1990, all information regarding potentially hazardous buildings and all hazardous building mitigation programs shall be reported to the appropriate legislative body of a city or county and filed with the Seismic Safety Commission.

§ 8875.3 Local jurisdictions; immunity from liability

Local jurisdictions undertaking inventories and providing structural evaluations of potentially hazardous buildings pursuant to this chapter shall have the same immunity from liability for action or inaction taken pursuant of this chapter as is provided by Section 19167 of the Health and Safety Code for action or failure to take any action pursuant to Article 4 (commencing with Section 19160) of Chapter 2 of Part

3 of Division 13 of the Health and Safety Code.

§ 8875.4 Annual Report

The Seismic Safety Commission shall report annually, commencing on or before June 30, 1987, to the Legislature on the filing of mitigation programs from local jurisdiction. The annual report required by this section shall review and assess the effectiveness of building reconstruction standards adopted by cities and counties pursuant to this article and shall supersede the reporting requirement pursuant to this article and shall supersede the reporting requirement pursuant to Section 19169 of the Health and Safety Code.

§ 8875.5 Coordination of responsibilities

The Seismic Safety Commission shall coordinate the earthquake-related responsibilities of government agencies imposed by this chapter to ensure compliance with the purposes of this chapter.